

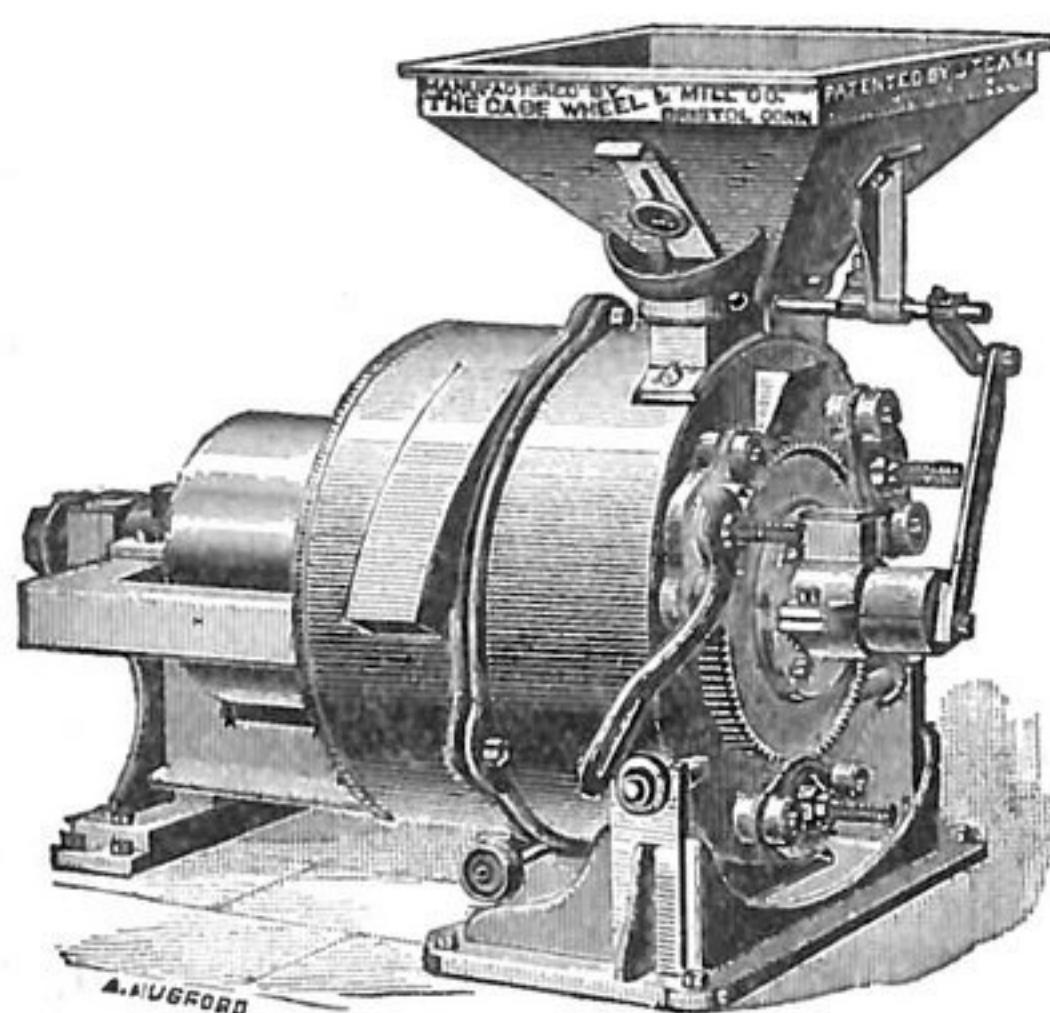
CHRONICLE OF THE GRAIN AND FLOUR TRADE

PUBLISHED EVERY MONDAY MORNING.

VOL. XX. No. 12.

BUFFALO, N. Y., MAY 20, 1889.

\$1.50 PER YEAR.



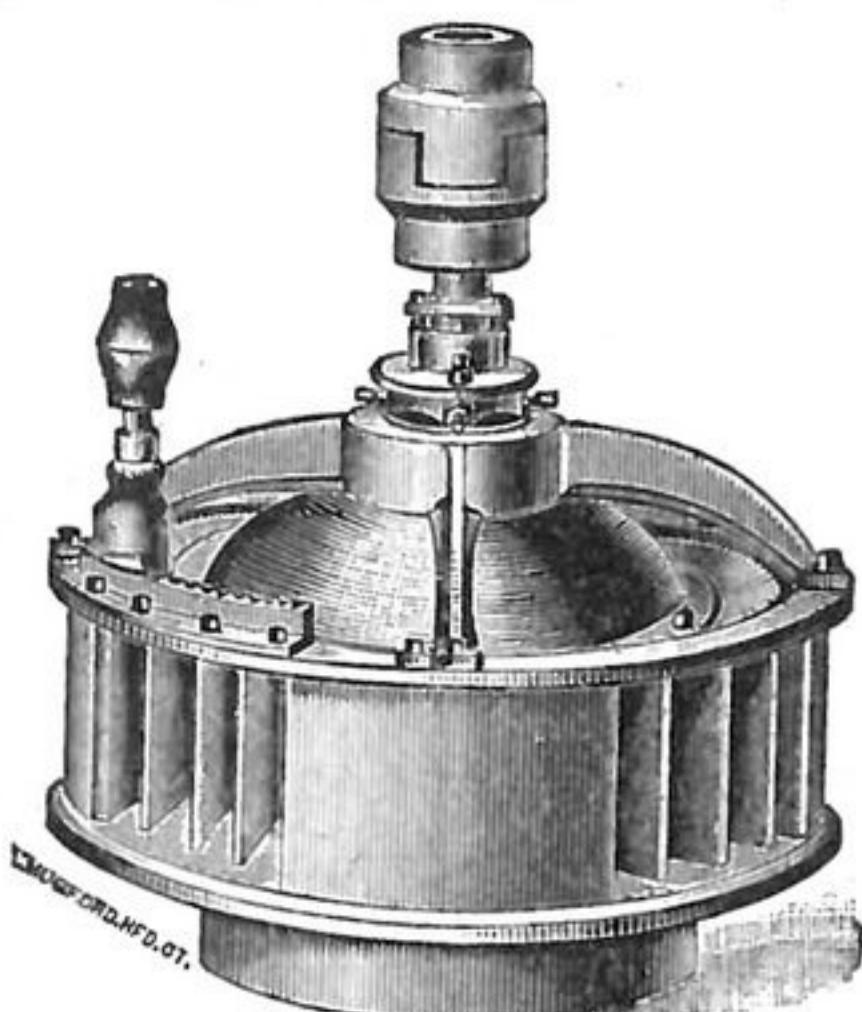
VICTORY OVER ALL OTHERS. SINGLE & DOUBLE VERTICAL GRINDING MILLS.

(J. T. CASE'S PATENT.)

FACTS ARE MIGHTIER THAN ASSERTIONS. READ WHAT THEY SAY:

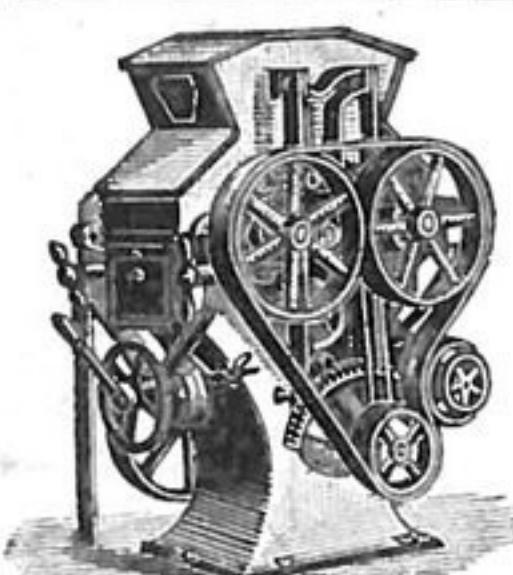
"Our 20-inch mill made by the Case Wheel & Mill Co. is in every respect satisfactory, easy to handle, and best results obtained of any mill in the country, with same quantity coal and power."—A. S. RUSSELL & Co., Meriden, Conn.
"Superior to any mill in use."—GEO. WESTON, Bristol, Conn.
"The best satisfaction in quantity and quality."—CHILD'S ELEVATOR, Manchester, Ct.
"We take pleasure in recommending it."—GARLAND, LINCOLN & Co., Worcester, Mass.
SEND FOR CATALOGUE—ILLUSTRATED AND DESCRIPTIVE.

The Improved National Turbine Water Wheel



The Best for Economy; The Best for Durability; The Best for Power. ONE THOUSAND FIVE HUNDRED NATIONAL WATER WHEELS IN USE Prove that our Assertions are Supported by the Leading Manufacturers in the Country. Send for illustrated catalogue and prices to the manufacturers.

The Case Wheel & Mill Co., Bristol, Conn.



Wheat Roller Mill.

BECAUSE the adjustable roll is not pushed against its mate but is held rigidly to it, which takes out all vibration.

BECAUSE it does 25 per cent. more work than any other roll.

BECAUSE the heated air is taken out of the machine.

BECAUSE it has the best feeder.

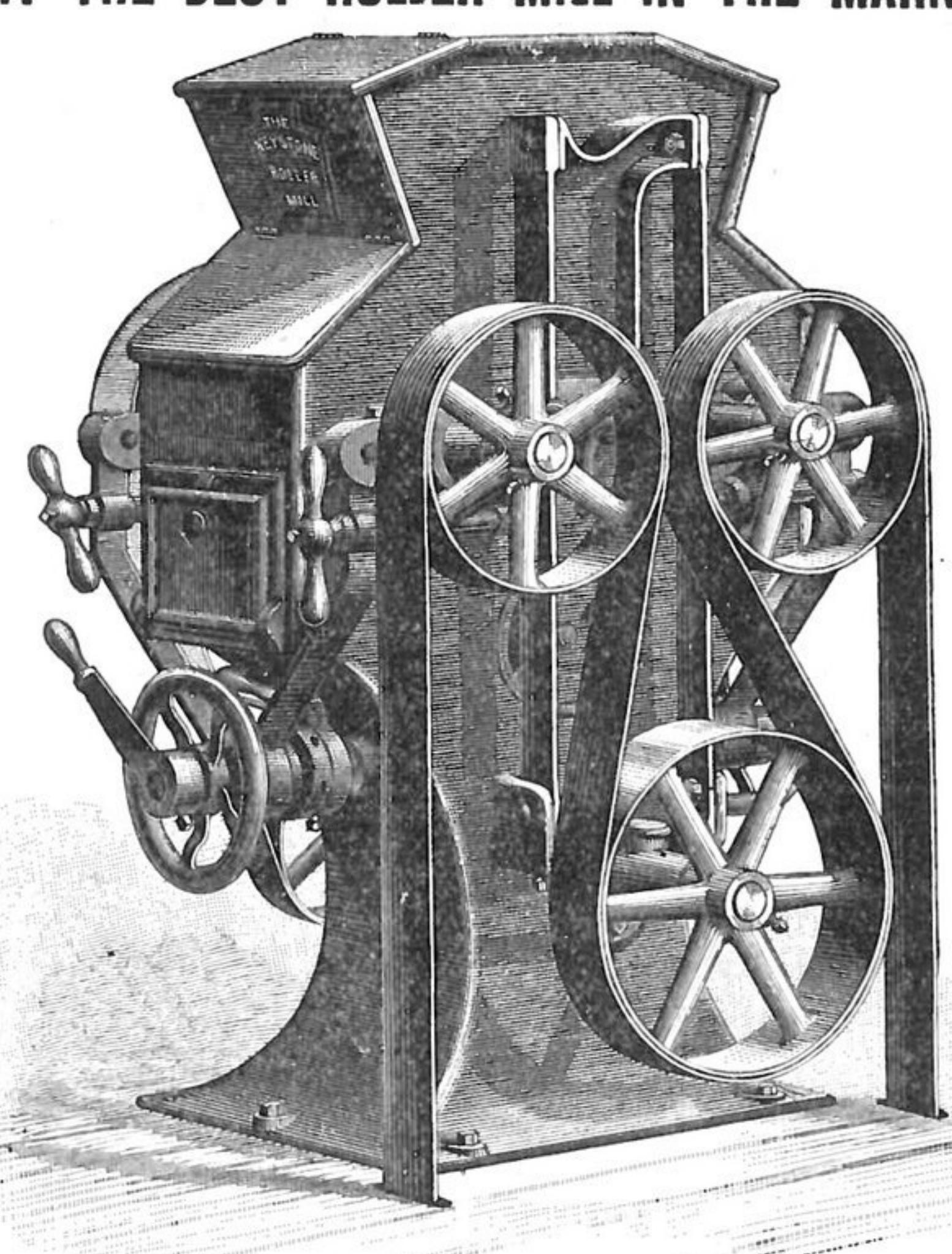
BECAUSE it has no tremor.

BECAUSE it has the effect of a roll without springs.

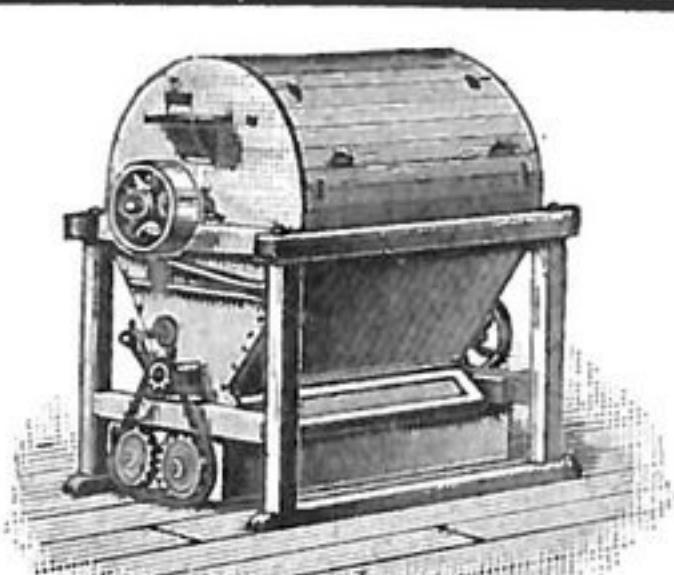
BECAUSE it can be trammed in a quarter of a minute.

BECAUSE you can tram either end of the four rolls.

Also ask for prices on the only Noiseless Sieve Scalper, the "Allfree" Improved Purifier, "Climax" Bran Dusters, and "Allfree" Flour Packer.



THE KEYSTONE FOUR ROLLER MILL.



Bran Drster.

BECAUSE it runs 25 per cent. lighter than any other roll.

BECAUSE all bearings are universal and never get out of line.

BECAUSE you can throw the rolls apart from either side.

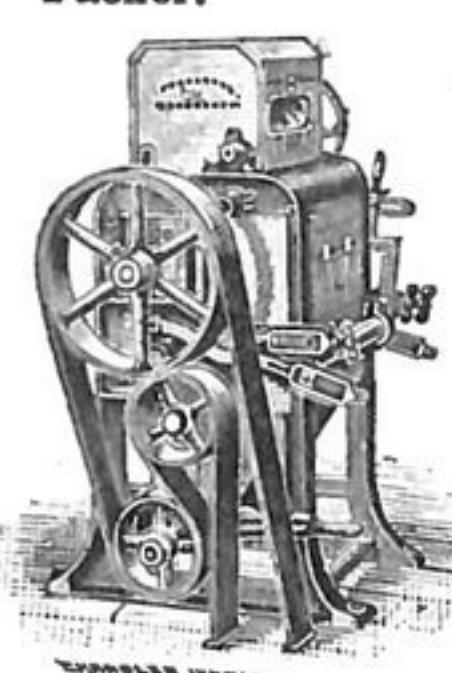
BECAUSE you can set both ends of the roll at the same time with one movement.

BECAUSE only one spring is used for both ends of rolls.

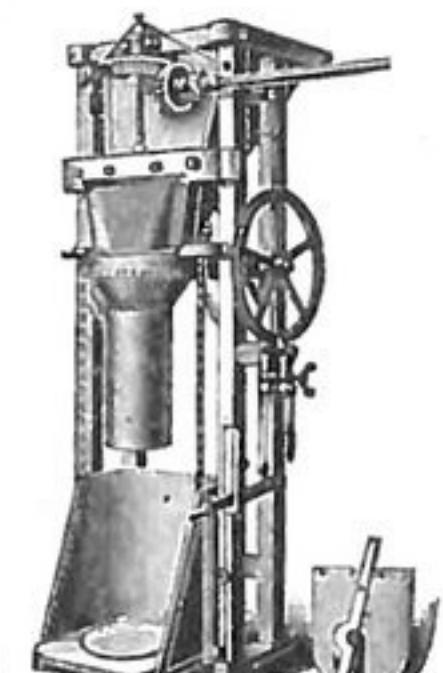
BECAUSE there is no slip to the differential.

BECAUSE no dust escapes from machine, all openings being covered.

Also ask for prices on "Allfree" Centrifugal Reels, "Success" Bolter, Three Reduction Corn Mills, Latest Improved Designs.



Corn Mill.



Flour Packer.

Complete Outfits for Flour or Corn Meal Mills of any Capacity.

THE J. B. ALLFREE CO., INDIANAPOLIS, IND.

108 & 105 South Pennsylvania Street.

Some Millers' Opinions

EXPRESSED THIS YEAR, 1889.

SHREVE, O., Jan. 25, 1889.

THE CASE MFG. CO.

Gentlemen: We called at Bank Jan. 22d and paid our last note, which we believe closes our dealings so far as our contract with you for remodeling our mills is concerned. We want to say that we are entirely satisfied with all our dealings with you. Our mill is all we could expect, and is doing us good work. Extending to you our best wishes, we remain,

Very respectfully yours,
FOLTZ & BRENEMAN.

WAVERLY, O., JAN. 27, 1889.

THE CASE MFG. CO.

Gentlemen: Although it has been but a few weeks since I have gotten my Waverly Roller Mills started as recently re-furnished with your system of breaks and rolls, yet I have already learned to my satisfaction that your outfit of milling machinery is the best in use to-day. I am now making a grade of flour that is equaled by few and excelled by none, in fact superior to any flour produced in this part of Ohio, and is fast distancing all competitors in the market. I can conscientiously recommend you as General Mill Furnishers.

Yours truly,
JAS. EMMETT.

E. M. NEWTON.

D. B. SMITH.

G. TERRY.

OFFICE OF GUTHRIE MILL CO.,
GUTHRIE, KY., Feb. 26, 1889.

CASE MFG. CO.

Gentlemen: Yours of the 20th to hand and in answer to inquiry about the five Inter-Elevator Flour Dressers bought of you will say that they are working perfectly satisfactory, and we regard them as being the best bolts we have ever seen, and if we had to build another mill, would use no other. We will take pleasure in showing and recommending them to any one who may be in need of a Flour Dresser. Wishing you much success in the future, we remain,

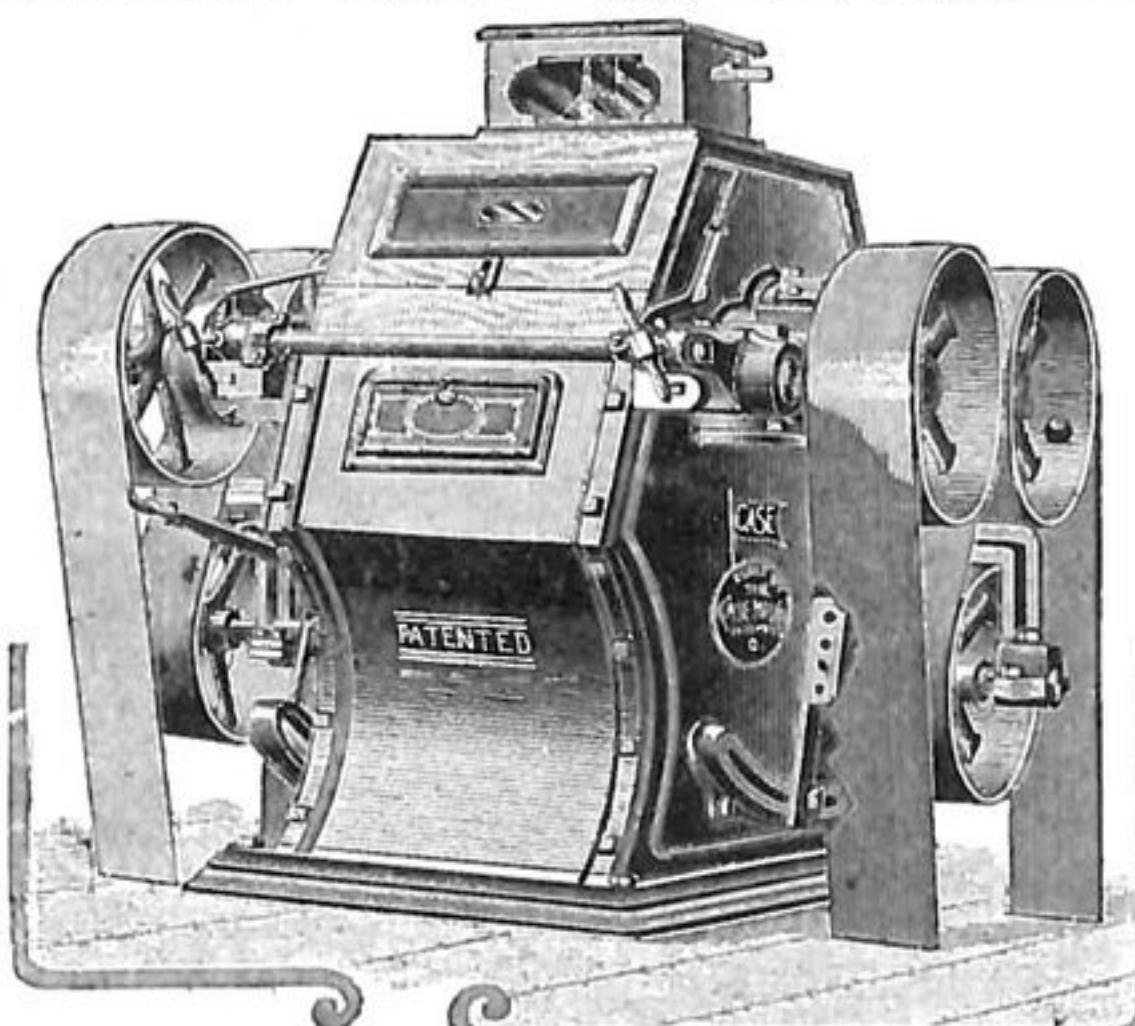
Yours truly,
GUTHRIE MILL CO.,
By E. M. Newton.

LEONIDAS, MICH., Feb. 4, 1889.

THE CASE MFG. CO.

Gentlemen: In reply to yours of the 31st ult., as to how I liked your machinery, would say I have a 3-break mill using 3 double stands of 6x18 Case rolls, one double stand of 6x15 rolls made by another firm. We started our mill September 1, 1888, and I must say *your rolls are more than you claim for them*. They started from the word "go." Not a single "hot journal," or any thing else to cause any trouble in the least. The other stand has been a continual bother from the start, running hot, and the feed would not work only in bunches, and let me say right here that *they cost me more money than the Case did*, and I mean in the near future to displace it by a *Case*. Your feed is *simply perfect*. It feeds even the full length of the rolls, and the beauty of all is we can stop and start the Case Rolls without touching a single lever; the other stands wants two men to stop and start. I also have a double stand of 9x18 Case rolls for feed. It does good work with half the power a 36-inch-buhr took for same amount of work. Should you wish to send any parties here to see my mill at work, I can prove to them all I have said. With very best wishes to the Case Company, I am, very respectfully yours,

GEO. ENGEL,
Successor to Espenhain & Engel.



The Gem Roll of the World.

WE BUILD NONE BUT FIRST-CLASS MILLS AND WILL GUARANTEE Each Mill We Build to Produce Results Excelled by None *COMPLETE LINE OF MILL SUPPLIES AT LOW PRICES.*

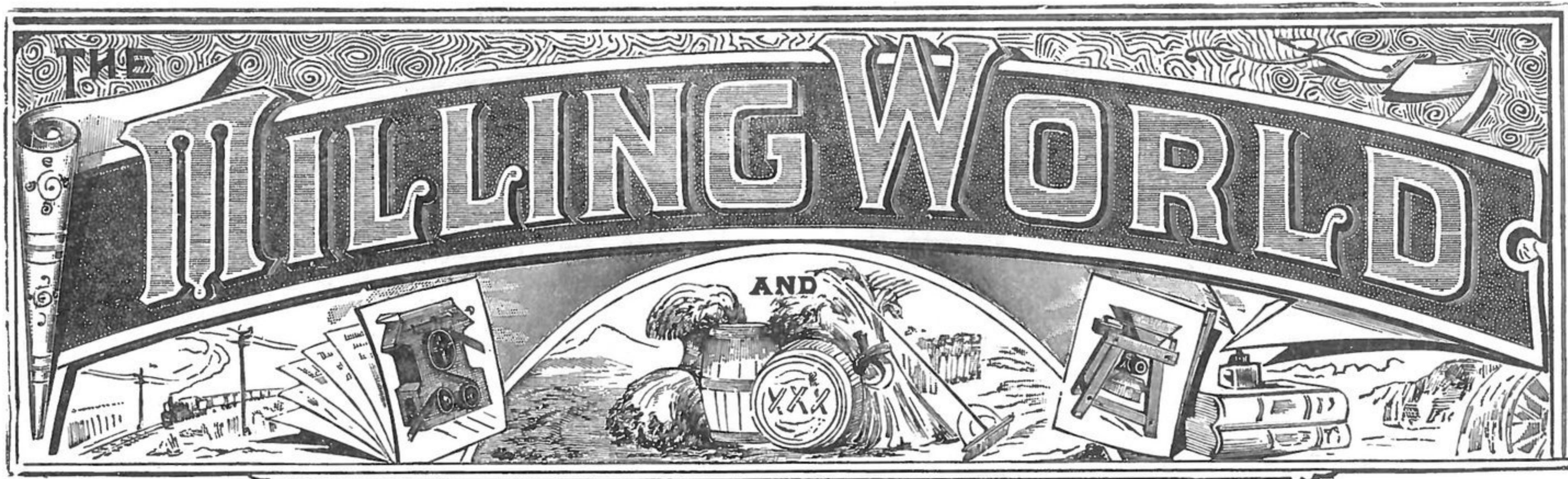
We have the most Complete Plant for Regrinding and Recorragating Rolls, and put in Any Style Cut Desired.

MACHINE WORK OF ALL KINDS DONE PROMPTLY:

—ADDRESS—

THE CASE MFG. CO., COLUMBUS, O.

PLEASE MENTION "THE MILLING WORLD."



CHRONICLE OF THE GRAIN AND FLOUR TRADE

PUBLISHED EVERY MONDAY MORNING.

VOL. XX. No. 12.

BUFFALO, N. Y., MAY 20, 1889.

\$1.50 PER YEAP.

How "sort of" all gone and extremely tired the Association will feel at Milwaukee without an "official organ" to "queer" the resolutions, to bulldoze and to whoop up things in the screamiest manner.

DURING April the fire-losses in the United States and Canada footed about \$16,000,000. The milling and allied industries contributed \$1,664,000. The total loss for the first four months of 1889 was \$46,600,000, against \$48,500,000 in 1888 and \$41,250,000 in 1887.

EUROPEAN reports do not indicate an unusually large wheat acreage this season. Nor are the conditions unusually favorable. Russia appears to have lost a good deal of her winter wheat through unfavorable weather, and in general the reports are not cheerful. Indian reports appear to confirm the shortage announced recently.

OF COURSE a trade journal, whose subscription price does not cover the cost of paper, composition, press-work, ink, wrappers, postage and literary work, does not exist merely for the money it may draw from advertisers! Certainly not! It merely exists to serve as a horrible example of "the survival of the fittest"! This is the season of the year when jays should most abound.

THOSE who pretend to be posted on the inside workings of the Millers' National Association announce that the meeting of the executive committee, at Milwaukee, in June, is likely to be the scene of a regulation riot. However severely the storm may rage in that preliminary meeting, the milling industry of the United States will not be affected seriously by the predicted tempest in a tea-pot.

IS THERE any thing in the hint, or rumor, that one of the "important" things to be attempted by some individuals at the Milwaukee convention of the National Association in June is the formation of a sort of publishers' pool? That would be a pretty piece of business at that time and on that occasion! It would not be altogether original, perhaps, however characteristic it might be. Combination and boycotting are the order of the day, and if the infection extends to trade journalists it will not be surprising.

AFTER all the returns are in, after all that can be said has been said against the crop reports of the Agricultural Department, who can show that Statistician Dodge's reports have not been closest to the truth? Certainly none of the alleged "correct" reports of the New York city guessers and gassers have for several years come within gun-shot of the truth on the wheat crop. Figures like those published by "Bradstreet's" hardly deserve to be noticed, as Chicago "Daily Business" has repeatedly shown, and as the Cincinnati "Price Current" has more than once proved. Statistician Dodge may not be accurate always, but he does not claim to be infallible, and it remains true that his reports represent more efforts to get at the truth than do the reports of those guessers who systematically assail his work. A little fairness in criticism will not damage the critics in the estima-

tion of honest men, and certainly it will further the interests of truth to recognize what is good. The journal that will attempt to make 50 reports cover a section that has a thousand points, from which information should be gathered to make a report at all reliable, is not a critic whose judgment of the work of others will carry much weight.

IT is somewhat amusing to see a trade-journal begging manufacturers to form a sort of pool, or trust, or ring designed to reduce the number of trade-journals to a basis suitable, or acceptable, or profitable to the beggar! Neighbors, this is a large country. The milling industry is a large interest. The number of milling journals possessing respectable subscription lists, speaking to and for the real millers of the country, and acceptably and satisfactorily serving their advertising patrons can not be arbitrarily reduced at the request of any one, or any two, or any three of the journals in this line, whatever their pretensions or their ambitions may be. That diminutive diversion has been attempted before. It failed. It will fail again and again, as often as it is attempted. Moonshine about the "survival of the fittest" can not atone for the impudent intolerance and the insufferable selfishness of any such boycott as the proposition alluded to implies. Whenever certain contemporaries feel that their own superiority is so pronounced that the mere continued existence of other contemporaries is a criminal impertinence, it would be well for them to remember that modesty and generosity are important essentials of true greatness.

CERTAINLY the millers of Canada are in a distressful predicament, not of their own seeking or making, from which the Dominion government could easily and promptly relieve them by either abolishing the 15-cent duty on imported wheat, or by advancing the duty on imported flour. Under the present conditions the duty in Canada actually discriminates against the Canadian miller to the extent of 20 cents on a barrel of flour, and to that extent in favor of the American miller who sends flour into Canada. The reasons for refusing to place the Canadian millers at least on a level footing with their American competitors are purely political, and they are also purely discreditable. There is no good reason why Ontario and Manitoba should be sacrificed for the benefit of New Brunswick and Nova Scotia, but they are thus sacrificed to-day. Some of our Canadian contemporaries have been in the habit of boasting of the "wise laws justly and honestly administered" of Canada, but if the present unreasonable, suicidal, inexcusable action of the Macdonald government may be taken as an example, the wisdom of some Canadian laws and the justice and honesty of their administering are open to serious question. Should the Canadian wheat crop of 1889 be shortened, as was that of 1888, by frosts and other inflictions, so that it becomes necessary to import American wheat to grind, and should the bull-headed Macdonald spirit prevail, there will be but one thing for Canadian millers to do, and that is to come to the United States in order to receive the benefits of the protective policy of the Dominion as administered by Sir John A. Macdonald.

COMPOUND Condensing or Non-Condensing.
16 SIZES, 5 to 500 H. P.
Not yet equaled by any form of Engine for HIGH FUEL DUTY AND SIMPLICITY.

STANDARD 13 Sizes in Stock.
5 to 250 H. P.
3000 in use in all parts of the Civilized World.

JUNIOR 6 Sizes in Stock,
5 to 50 H. P.
An Automatic Engine cheaper than a Slide Valve.
WELL BUILT. ECONOMICAL. RELIABLE.
Over 300 Sold the First Year.

All the above built strictly to Gauge with INTERCHANGEABLE PARTS.
REPAIRS CARRIED IN STOCK.
SEND FOR ILLUSTRATED CATALOGUES.

WESTINGHOUSE ENGINES

The Westinghouse Machine Co.
PITTSBURGH, PA. U.S.A.

SELLING DEPARTMENT IN THE UNITED STATES.

New York,	17 Cortlandt St.	Westinghouse, Church, Kerr & Co.
Boston,	Hathaway Building,	
Pittsburgh,	Westinghouse Build'g,	
Chicago,	156, 158 Lake St.	
Philadelphia,	608 Chestnut St. M. R. Muckle, Jr. & Co.	
St. Louis,	302, 304 Washington Av.	Fairbanks & Co.
Kansas City,	312 Union Avenue,	
Denver,	1330 Seventeenth St.	
Omaha,	1619 Capitol Avenue, F. C. Ayer.	
Pine Bluffs, Ark.	Geo. M. Dilley & Sons.	
Salt Lake City,	259 S. Main St.	Utah & Montana L. Granite St.
Butte, Mont.	Machinery Co.	
San Francisco,	21, 23 Fremont Street, Parke & Lacy Co.	
Portland, Or.	33, 35 N. Front St. Parke & Lacy Mch. Co.	
Charlotte, N. C.	36 College St.	The D. A. Tompkins Co.
Atlanta, Ga.	45 S. Prior St.	
Dallas, Tex.	Keating Imp. & Machine Co.	
Chattanooga, Tenn.,	C. E. James & Co.	

Dawson's Roller Mill

Is acknowledged to be the very best in the market. It has our Patent Automatic Centrifugal feeder, never failing to feed the stock the full length of rolls in an even sheet. It is the Latest and Best feed out, uses less power and is simple in construction. It can be placed on any style of machine with little expense. We use for roll bearings phosphor-bronze metal which will admit rolls being run at any speed without heating and with little friction, and uses little oil. We use the Dawson Corrugation, which is admitted the best in long or short system mills as the action is granulating rather than CUTTING.

We have a large plant to Re-grind and Re-Corrugate Rolls.

Owing to our late increased facilities and central location we are enabled to ship goods promptly on the shortest notice.

PARTIES CONTEMPLATING REMODELING THEIR MILLS OR BUYING ANY ROLLER MACHINES ARE REQUESTED TO PUT THEMSELVES IN CORRESPONDENCE WITH US.

FOR PRICE LISTS AND CIRCULARS, ADDRESS,

Dawson Roll Works, Harrisburg, Pa.

BIRD & CRANE MFG. CO., KALAMAZOO, MICH.

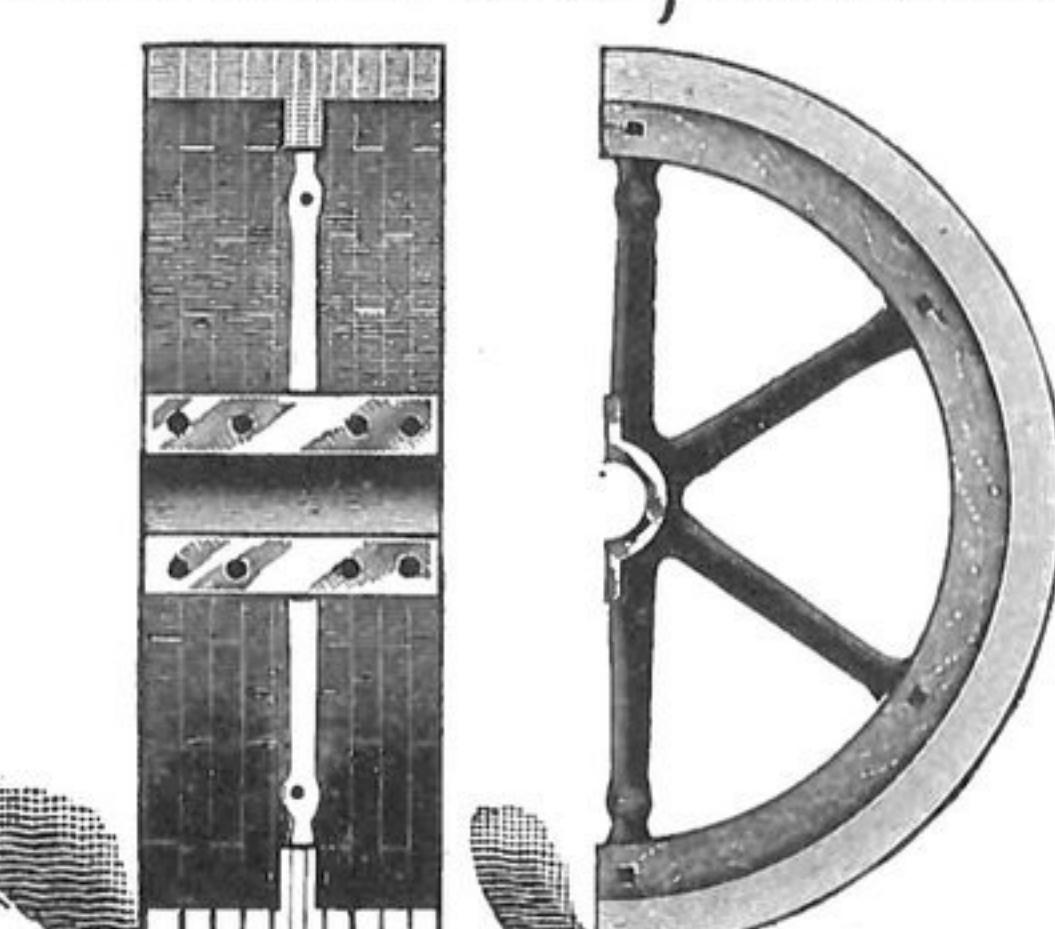
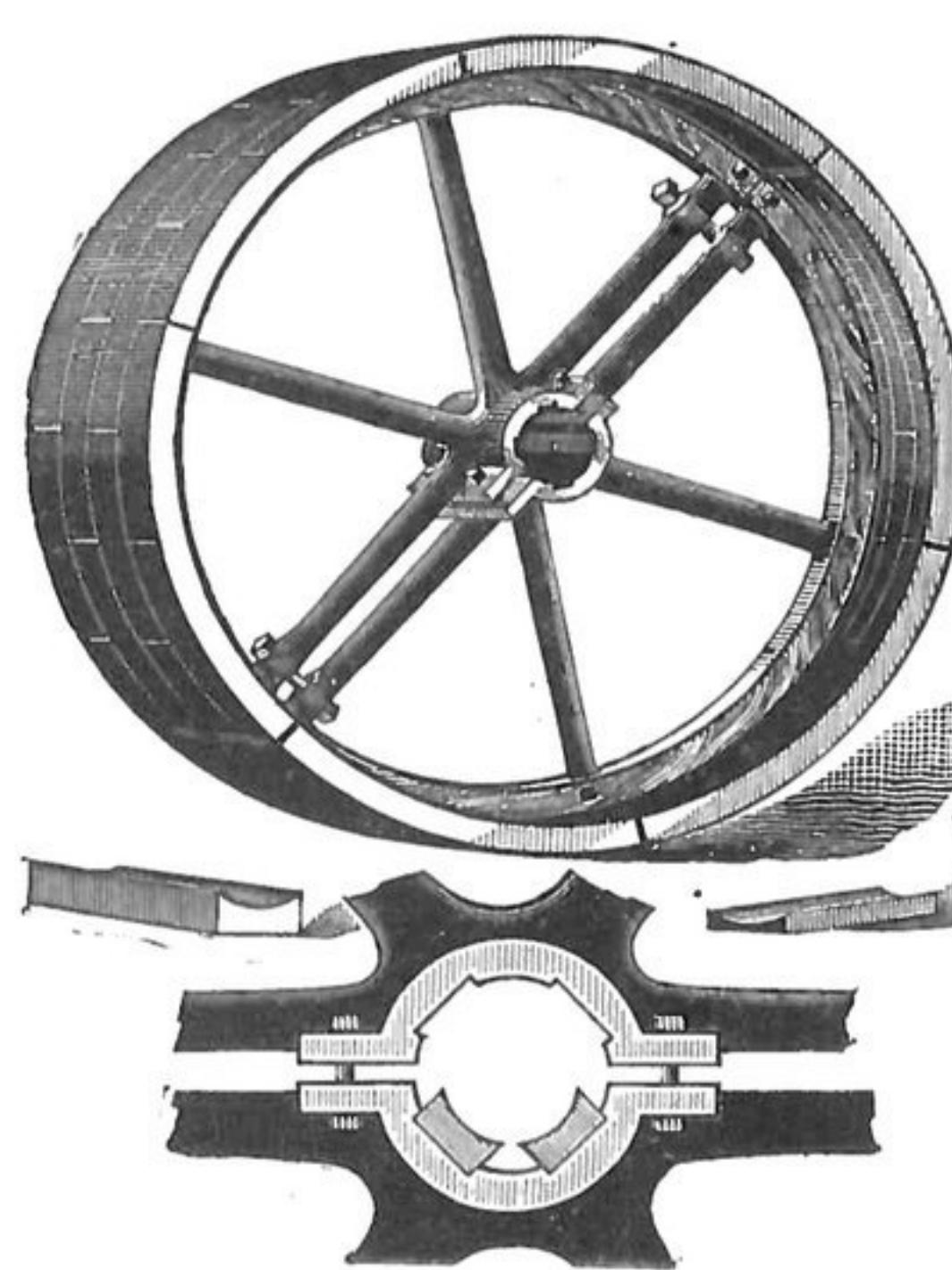
MANUFACTURERS OF PATENT

Wood Split Pulleys

WOOD RIM WITH IRON ARMS.

The Best Pulley on Earth!

Is very easily and quickly adjusted to Shaft. Has Patent Iron Bushings Interchangeable, to Fit Different Diameters of Shafts. Has FOUR or SIX Bearings on Shaft. This fastening never slips. Every Pulley strongly built and perfectly balanced.



SEND FOR CATALOGUE AND PRICE LIST.

PUBLISHED EVERY MONDAY. OFFICES: { Corner Pearl and Seneca Streets,
Over Bank of Attica.
McFAUL & NOLAN, - - - PROPRIETORS.
THOMAS MC FAUL. JAMES NOLAN.

SUBSCRIPTION.

In the United States and Canada, postage prepaid, \$1.50 Per Year, in advance; remit by Postal Order, Registered Letter, or New York Exchange. Currency in unregistered letter at sender's risk.

To all Foreign Countries embraced in the General Postal Union, \$2.25 Per Year, in advance.

Subscribers can have the mailing address of their paper changed as often as they desire. Send both old and new addresses. Those who fail to receive their papers promptly will please notify at once.

ADVERTISING.

Rates for ordinary advertising made known on application.

Advertisements of Mills for Sale or to Rent; Partners, Help or Situation Wanted, or of a similar character One cent per word each insertion, or where four consecutive insertions are ordered at once, the charge will be Three cents per word. No advertisement taken for less than 25 cents. Cash must accompany all orders for advertisements of this class.

Orders for new advertisements should reach this office on Friday morning, to insure immediate insertion. Changes for current advertisements should be sent so as to reach this office on Saturday morning.

EDITOR'S ANNOUNCEMENTS.

Correspondence is invited from millers and millwrights on any subject pertaining to any branch of milling or the grain and flour trades.

Correspondents must give their full name and address, not necessarily for publication, but as a guarantee of good faith.

This paper has no connection with a millfurnishing house and aims to represent the trade without prejudice, fear or favor.

Address all communications

THE MILLING WORLD, BUFFALO, N. Y.

Entered at the Post Office, at Buffalo, N. Y., as mail matter of second-class.

SITUATIONS WANTED.

Advertisements under this head, 25 cents each insertion for 25 words, and 1 cent for each additional word. Cash with order. Four consecutive insertions will be given for the price of three.

BUCKWHEAT MILLING A SPECIALTY.

A reliable Roller Miller wants work. Can make one-third more buckwheat flour than average millers, conditions the same. Granulated meal, etc. H. N. Z., 228 James street, Buffalo, N. Y. 710

SPECIAL ADVERTISEMENTS.

Advertisements of Mills for Sale or Rent, Partners Wanted, Machines for Sale or Exchange, etc., etc., cost 1 cent per word, for one insertion, or 3 cents per word for four insertions. No order taken for less than 25 cents for one insertion, or 50 cents for four insertions. Cash must accompany the order. When replies are ordered sent care of this office, 10 cents must be added to pay postage.

MILL FOR SALE.

Flour mill; water power; good location; on easy terms. For information address, THOS. BRODERICK, Byron, Olmsted County, Minn. 611

FOR SALE OR RENT.

Grist-Mill and Woolen Factory. Also large two-story frame building. Very convenient for woodenware works. Good water power and shipping point, on line of three railroads. Apply to M. D. OLNEY, Irvine, Warren county, Pa. 811

FOR SALE.

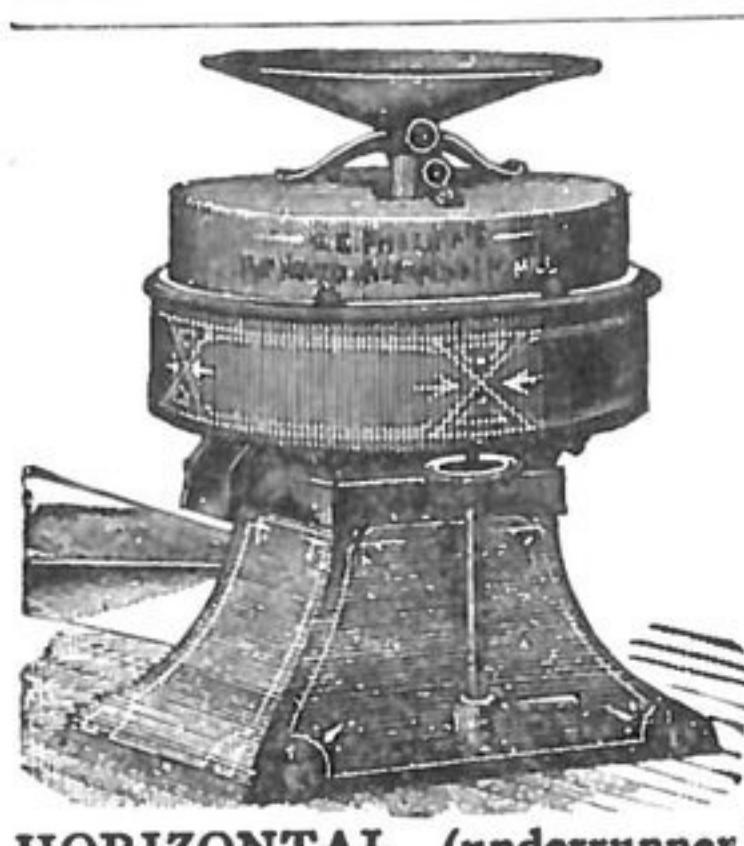
Several good second-hand and new turbines of various styles. Second-hand price list and descriptive matter and prices of our new machines sent free. Every one interested in the shortest route to successful milling on rolls or in grinding corn and feed with the least expense of power, should address us before buying.

FLENNIKEN TURBINE CO., Dubuque, Iowa.

8tf

MILL MACHINERY FOR SALE.

One No. 0 Standard Combined Separator, Smutter and Brush Machine; new, best make. One 20-Inch Vertical Portable Mill, French Buhr Stone, hung on horizontal shaft; capacity 25 to 40 bushels per hour; new, best make. One 14-Inch Vertical Feed Mill; best make, new, a bargain. One No. 6 Dustless Separator; new, a bargain. One No. 1 Full Rigged Combined Dustless Separator; new, a bargain. Four Corn Cob Crushers, right or left hand, driven from above or below, best make; capacity 40 to 60 bushels per hour. Two No. 1 Corn Shellers. New. One No. 2 Purifier. New. Best make. A bargain. For particulars address, FRANK SMITH, care of THE MILLING WORLD, Buffalo, N. Y. 5tf



HORIZONTAL (underrunner.)

If you are desirous of obtaining the best Mill or Cob Crusher, send for our catalogue and be convinced that our's fill the bill. Can not fail to please you. They are guaranteed to prove as represented.

C. C. PHILLIPS,
OFFICE, 20 SOUTH BROAD STREET,
PHILADELPHIA, PA.

NEVER-FAILING WATER-POWER

FOR SALE OR TO LET.

Situated at the junction of two rivers, 95 miles from New York City, on the West Shore Railroad. Mill site against track. A NATURAL ROCK DAM with from one hundred to one thousand horse power. Railroad siding on premises. Station, post and telegraph offices in sight. Factory employees to be had at low wages. Further particulars given by addressing. 411

HOWARD FINGER, - - SAUGERTIES, N. Y.

FOR SALE.

One half or whole, or to rent, a first-class 4-run mill; stone building; never failing water power; good custom and retail trade. Address, N. R. SHEPARD, Marcellus, Onondaga county, N. Y. 11

FOR RENT CHEAP.

A hundred-barrel flouring mill, and the late roller improvements, a large feed grinding trade in connection. Mill has a good exchange and local flour trade, situated on the C. and N. H. Ry, at Harvard Junction, sixty-three miles from Chicago. THE HARVARD SEWING MACHINE CO., Harvard, Ill. 1215

FOR SALE.

"Genesee Valley Mill," situated 27 miles south of Rochester, N. Y., on the Genesee River. Abundance of water power at all times. Western New York & Pennsylvania R. R. runs past its door. No carting needed; loads and unloads cars by elevators and spouting. Coal sheds, etc. Good trade. Size of main building 30x50 feet, four stories; wing 30x36 feet, two stories high. Three sets of first-class stones, one double set of rollers, all in good order. Large pump in mill to supply water for large salt block near by. Pump pays about \$300 per year. Splendid wheat country. Suitable dwelling house near by. Inquire at mill, or address, S. H. BASOM, Administrator, Alabama, Genesee county, N. Y. 1114

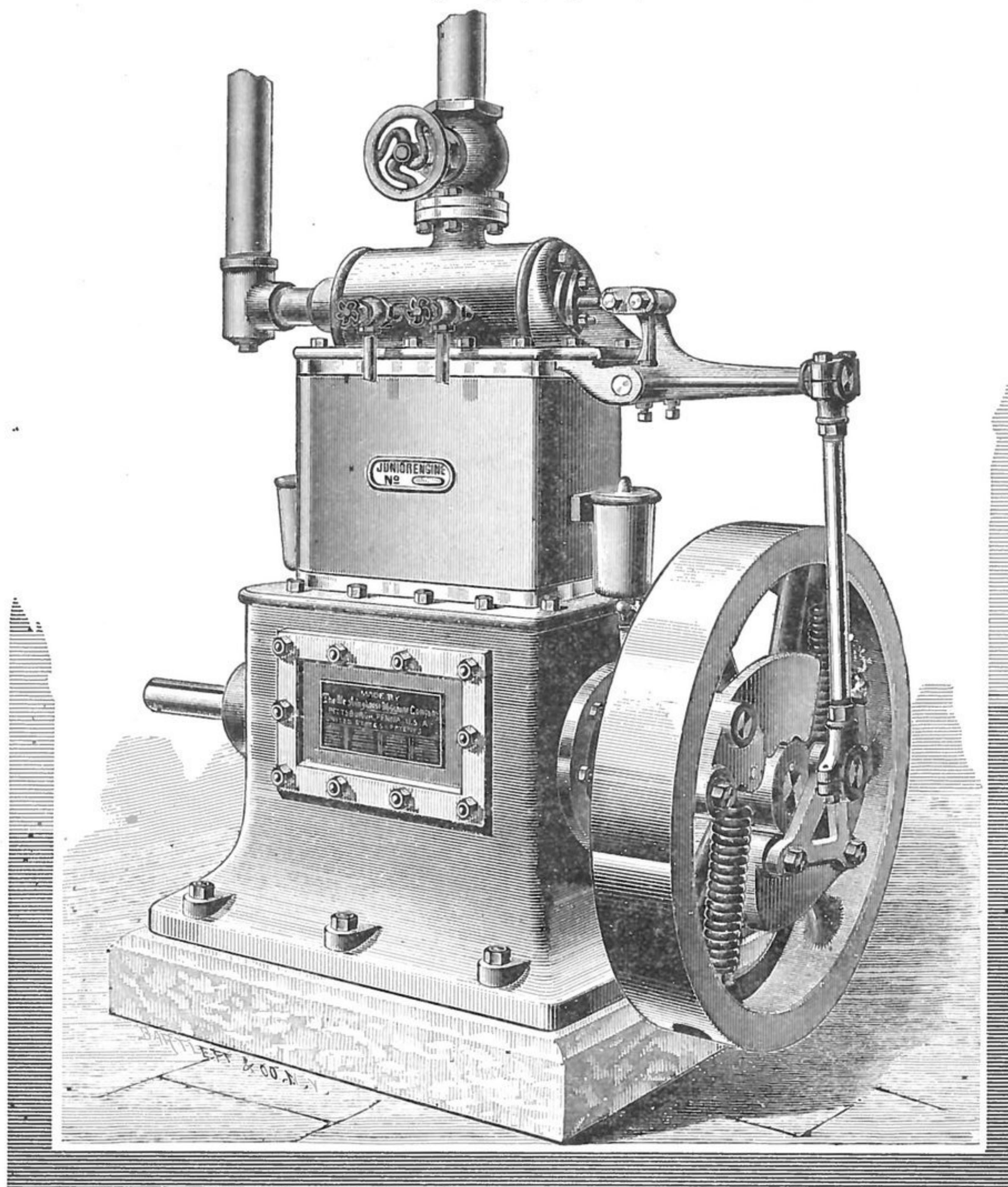
LAST week we published what purported to be a translation of an invitation by the French millers to the American millers to send representatives to Paris in August next. We have not seen the original French document, but the "translation" of it sent out from Milwaukee reads somewhat curiously, and it seems that the Milwaukee construction of the French idiom does not result in the most transparent English.

ACCORDING to a recent estimate, based on the already approximately known crops of India, Australia, Chili and the Argentine Republic, and on the allowance for an average crop in Europe and the United States, the wheat crop of 1889 for the whole world promises to fall at least 100,000,000 bushels below even the deficient crop of 1888. This is a bullish estimate, but when the actual size of the 1889 crop is made apparent in the markets, it will probably be found that the estimates are practically worthless guesses. Up to this date no one knows what the crop of 1888 really was. Despite the accepted conclusion that the crop was short by over 100,000,000 bushels, there seems to be plenty of wheat in the world.

FOR some time the most thoroughly misnamed thing in the United States has been the Millers' National Association. While boasting that name, it has been neither national nor millers' in any sense of the words. Now it can no longer hold first place as a pretentiously misnamed thing. It must step down to second place and allow the first place to be taken by "The United States Miller and the Milling Engineer," which is now certainly the most overnamed periodical in the country. The conglomerated consolidation that has resulted from the swallowing of Editor Hoppin's bright "Milling Engineer" by Editor Cawker's not bright "United States Miller," in Milwaukee, is the most comically misnamed journalistic craft afloat in American waters. In its sixteen pages there are eight pages of advertising and eight other pages that would be far more interesting if they were devoted to advertising. There are articles on California flumes, clippings of miscellaneous items, obituary notices, a school-girl's composition on a flour-mill, a picture of a proposed building in Canada, pictures of California landscapes and a hodge-podge of other things not even distantly related to milling or interesting to millers. Yet it is a self-styled milling journal! As to the "engineering" features of the journal, they are conspicuously absent. The name is altogether misapplied. The editor makes a remark that gives color to the belief that he considers it a "sewer," with an attachment of "noxious exhalations," which can not be stopped. Certainly "sewer" would be quite as appropriate a name for it as its present long-system nomenclatural freak. All the milling and all the milling engineering contained in it can be read in the length of time it requires to pronounce its name deliberately. Colonel, shoot several furlongs of that cacophonical supercognomenclature.

THE "JUNIOR" AUTOMATIC ENGINE.

In the accompanying engraving is illustrated the famous "Junior" automatic engine, manufactured by the well-known Westinghouse Machine Company, of Pittsburgh, Pa. These high-class engines have come rapidly to the front, and their sales are counted by the thousand. The "Junior" is a self-contained, single-acting, automatic-governing and to a large extent self-lubricating engine. Specifically, it consists of a pair of single-acting cylinders, with trunk pistons, having across the cylinder-head a piston-valve, actuated by an external shaft-governor contained in the fly-wheel. The cylinders and piston are of charcoal iron to chill on the test pig $\frac{1}{2}$ ", which is the standard locomotive practice. The connecting-rods are of drop-forged steel. The crank-shaft is forged out of a solid billet of steel without a weld. The main bearings are babbitted with the finest metal obtainable, and all the other bearings are bushed with bronze. The water carried over with the steam is allowed to escape by brass-spring relief-cocks, without injury to the engine. The cylinders and the valve are oiled by an automatic sight-feed cup. The shaft and connecting-rods revolve in the lubricant contained in the crank-case. The valve is driven from a wrist-pin in the governor instead of from an eccentric. The reliable piston-valve is adopted in all the Westinghouse engines. It is the cheapest form to make, maintain and replace. It is balanced against any pressure of steam at all points in its travel. It is always tight and is subject to the minimum of wear. Its perfect balance permits the use of a very sensitive governor. Every Westinghouse engine is well and thoroughly tested. It is piped to steam at 80-pound pressure and run continuously for an average of ten hours, under its full load measured on a friction-brake, and under every condition of regular service. All parts of the "Junior," great and small, are made accurately to gauge and are consequently interchangeable. It is an engine that achieves a very high degree of economy. The makers state that their experience has led them to believe "that few manufacturers recover over 60 per cent. of their gross power expended, in useful work under ordinarily favorable conditions." The Westinghouse engines, "Junior," "Standard" and "Compound," have been expressly designed to correct the manifest evils that lead to so large a loss: 1. By a system of copious, though economical, automatic lubrication, which, they believe, is universally admitted to be the most thorough and effective of any in use. If a machine lubricate itself, it is, as a rule, more trustworthy and attentive than the average man as we find him. 2. By eliminating the lost motion due to the double-action principle entirely, using two cylinders instead of one, taking steam only at the upper end and making the press-



THE WESTINGHOUSE "JUNIOR" AUTOMATIC ENGINE.

ure continuous in one direction only, instead of reversing the full power of the steam at every stroke. 3. By such speeds as will enable the user to belt or couple direct from the engine to the machine, or its immediate section of line-shafting, without the intervention of pulleys, hangers, shafting, etc., otherwise required merely for transmission of the power from the engine to the work. This, with the two preceding counts, enables him successfully to subdivide his power and thus utilize the entire net power of each engine on productive work. Right here he may often save from 20 to 50 per cent. of his fuel account at once. 4. By an excellent automatic governor, which insures great steadiness of speed. A governor can regulate the steam supply twice only in each revolution, hence, more revolutions mean more frequent regulation as well as increased efficiency of the fly-wheel. The variation in the speed of these engines between full load and running light will not exceed 2 per cent. 5. By a system of duplication of parts whereby repairs are quickly made at a minimum cost, and the great losses otherwise due to long stoppages for repairs are practically eliminated. Apply to the Westinghouse Machine Company for their illustrated catalogue giving full description and measurements of the "Junior" automatic, reversing, marine, throttling and blank engines.

—O—
POINTS IN MILLING.

THE percentage of yield has been somewhat unsettled by the wheat of 1888. Reports show wide variations in results on the same grade of grain in different mills employing the same number of breaks and the same machinery. That fact shows that much depends on the millers themselves. Careful millers secure the highest percentage of flour by bestowing

extra care on their work, and careless millers, or ignorant millers, are at the tail end of the procession because of their ignorance or their carelessness.

SCENE in a British mill: Foreman, to assistant: "Have you cooked, baked, fried, steamed, whizzed and dried the wheat for to-day's grinding?" Assistant: "I 'as, soor!" Foreman: "All is well. Mix a quarter each of Milwaukee, Duluth, Walla Walla, Manitoba, Azima, Kent, Kubanka, Fyfe, Taganrog, Ghirka, Rostock, Bombay Red, Calcutta White, Calcutta Red, Dantzig, Karachi, California, Minnesota Hard Spring, Rivetts, Norfolk, Essex, Sebastopol, Saxonska, Hamburg, New Zealand, Australian, Chilian, Argentine, Petersburg, Algerian, Abyssinian, Kamtschatkan, Alaskan and Egyptian wheats. How many quarters does that make?" Assistant: "Thoorty-foive, soor!" Foreman: "That is just the proper mixture. Stir thoroughly, boil to a thick paste, whizz the paste, bake brown, put in some salt, and then dry the scientific mixture thoroughly and send it

to the hopper!" Assistant: "Ees, soor! As oo say, soor!" Later in a bakeshop: Baker, alone: "That flour of Jones's is demnition poor! It is n't fit for pig-feed! Here goes the dough into the swill-tub! Here, Smith, run to Green's and order 50 sacks of American patent sent up directly! I'll never buy another ha'penny worth of Jones's stuff again!"

SEVERAL months have elapsed since any one has "wrested the scepter of supremacy as a milling center" from Minneapolis. Boys, give us a wrest!

ABOUT the most comical feature of the mooted crease-dirt question is the statement of the anti-crease-dirters concerning their way of proving that crease-dirt does not exist. Boiled down and plainly stated, their "way" is simply this: They put in extra cleaning-machines of the best class and clean the wheat so thoroughly that the seam is freed from its dark substance, either wholly or so well, at least, that not enough of the impurity is left to make a bad discoloration in the flour. That is a simple way, indeed! Any one can understand it. After the crease-dirt is removed it does not exist. Now, why not go on and argue that there is no bran on wheat, and then prove that there is none by treating the grain so that all the coating is removed? That method would disprove the existence of bran quite as thoroughly and satisfactorily as it disproves the existence of the crease-dirt. Meanwhile, there remains in all ordinary wheat a seam that is filled with a substance that is neither flour nor bran. Denying that it is there will not abolish it. Removing it by thorough cleaning will not prove that it was not there before the cleaning.

I HAVE been making some close inquiries for some months concerning the quantity of wheat required to make a barrel of flour. My note-book shows figures ranging from 4:10 to 4:50 and even to 5. A hundred inquiries show three of the 4:10 yield, and the millers who gave those figures were not sure that they actually showed what they were doing. The cases from 4:10 to 4:20 are very few, only five or six being given. From 4:20 to 4:35 there are ten, and from 4:35 to 5 are found over 80 per cent. of the millers answering the question. The number above 3:45 is far larger than the figures ordinarily quoted would prepare one to expect. I would like to see the figures for 5,000 of the largest and best mills in the United States. Those figures would probably bring the average closer to 5 bushels than to any other figure. In my limited list, which includes a proportion of small mills, the average is so close to 5 bushels to the barrel that it seems justifiable to drop the traditional 4:30 average and adopt plain 5 in all round calculations. It is not a little singular that some of the mills going closest to the 5-bushel notch are plants of the very best class, using good grain and the best of machines. Of course, in all cases there is a want of thorough examination, a lack of experimenting for a length of time sufficient to make the figures absolutely reliable, but I believe that investigation will prove on a large scale what my inquiries have shown on a small scale.

ANTI-MODERN-PROCESS-MILLING cranks are continually pitching into white flour and condemning it as the cause of the poor teeth of the present generation. They claim that the bran contains the elements that make teeth and bone, but they fail to say that up to date there has been found no human being whose digestive contraptions are able to digest the bran. They claim that bran bread, brown bread, oatmeal and similar dishes are necessary to preserve the teeth and the health, and yet those are the dishes that form the principal diet of the bald, the toothless, the nervous, the bloodless, the sickly, the peevish, the dyspeptic and the generally disagreeable humans the world over. If bread were the only article of food eaten, it would be more important to provide for the retention of phosphates and other chemicals in it, but, with meats and vegetables in abundance, any lack of any particular element in the bread will more than be made up. Our friends, the crank enemies of fine flour, should remember that it is quantity rather than quality, gluttony rather than chemistry, that plays havoc with

human health. More misery is caused by excess in eating than by food deficient in this or that particular element. They are too prone to charge all the evil effects of poisons, stimulants and excess to the fine flour eaten in these days.

BREADSTUFF EXPORTATION.

Breadstuff exportations from the United States during April amounted to \$9,537,876, against \$8,032,559 in April, 1888. For the four months ending with April 30 this year the total value of breadstuffs exported was \$38,301,347, against \$35,818,399 for the same months in 1888. For the ten months ending April 30 this year the total was \$101,282,823, against \$110,028,536 for the corresponding period a year ago. Some notable changes in the items and totals have been made during the past ten months in comparison with a year ago. For the ten months ending April 30 this year the barley exports were 1,358,664 bushels, worth \$820,854, against 469,757 bushels, worth \$270,979 a year ago; corn 55,290,896 bushels, worth \$26,739,608, against 20,034,706 bushels, worth \$10,768,500; corn-meal 260,160 barrels, worth \$733,837, against 224,748 barrels, worth \$625,466; oats 521,150 bushels, worth \$208,758, against 256,848 bushels, worth \$108,348; oatmeal 8,084,526 pounds, worth \$218,438, against 4,054,424 pounds, worth \$123,580; rye 149,161 bushels, worth \$81,333, against 44,350 bushels, worth \$29,194; wheat 39,449,015 bushels, worth \$35,847,222, against 60,289,237 bushels, worth \$51,542,547; wheat flour 7,542,837 barrels, worth \$36,632,773, against 10,183,742 barrels, worth \$46,559,922. The only considerable decrease is shown in wheat and wheat flour, the total of those two lines showing \$72,479,995 for the past ten months, against \$98,102,469 for the corresponding period a year ago. The loss on those two lines amounts to \$25,622,474, while the total decrease in all breadstuffs exported is only \$8,745,713. After all, the crops of 1888 in the United States were not so bad as they might have been.

A PUBLIC BENEFACTOR.

"Who is H. H. Warner, of Rochester, N. Y., whose Safe Remedies, especially Warner's Safe Cure, have attained such success and celebrity at home and abroad."

Hon. H. H. Warner, then, is a leading and honored resident of Rochester not only but a prominent and influential citizen of the United States. On several occasions chosen by his party as a National delegate to nominate a President of the Republic, he has been a member of the Republican State Committee and of its Executive Committee. He is a member of the American Institution for the Advancement of Science; President of the Rochester Chamber of Commerce; a successful and upright business man. He has given away fortunes in charities. The celebrated and costly Warner Observatory of Rochester was conceived, endowed, and is maintained by him. His munificent prizes for the discovery of comets has been at once the wonder and delight of the scientific world.

The yellow fever scourge in the South, the Ohio floods, the fire disasters of Rochester and other cities awakened his profoundest sympathies and in each instance his check for \$500 to \$5,000 swelled the several relief funds. Where other wealthy men give tens and hundreds, he gives hundreds and thousands.

The world has need of more such men.

An incident led him into the manufacture of medicine. Seized some twelve years ago with what the ablest physicians termed fatal kidney disease, he was miraculously restored to health by what is now known as Warner's Safe Cure. At once he resolved to make known the merits of so potent a remedy, and the consequence is that to-day he has immense laboratories and warehouses in the United States, Canada, England, Germany, Austria, Australia and Burmah. Sales of his Safe Remedies are enormous, and their power over disease simply marvelous.

The merit of a production is in exact keeping with the character of its producer. An honest and reliable man himself, Mr. Warner makes honest and reliable medicines—a fact abundantly attested by their phenomenal efficacy and popularity.

SETTING BOILERS OVER A SINGLE FURNACE.

"The Locomotive."

We have had a number of calls for designs for settings arranged so that one furnace will suffice for several boilers. The cuts illustrate one of these settings designed for a saw-mill, Fig. 1 giving an end elevation and Fig. 2 a side elevation. In this case only two boilers are shown, but the method can be readily extended so as to include three or four; and though this is as far as we have yet carried the principle, we can see no reason why even six boilers might not be mounted in the same manner, if there would be any advantage in doing so. Since there is to be but one furnace, it is evident that the boilers can not be supported in the usual manner, but must be suspended from overhead by means of beams or trusses. In the pair here shown each boiler was 42 inches in diameter and 21 feet long, and the two together might weigh 28,000 pounds when filled with water. To support this weight six wrought-iron beams, *D D*, are provided, each being $10\frac{1}{2}$ inches high and of sufficient length to reach over the brick walls on each side and rest on cast-iron posts, as shown. These beams are arranged in pairs and bearing-plates or saddle-pieces rest on them, from each of which a two-inch hanger is suspended, the lower end of which is formed into a hook which enters the forged ear, *C*, riveted to the shell. The boilers are set much closer to one another than usual, the space between them in this instance being only three inches. This space is closed by means of a

recommended, and it is accordingly arranged, in this case, as shown in the cuts. It then enters near the centers of the heads, running inside nearly through to the back head before it discharges. We have shown the setting as we should always recommend it to be put in; but objections to this method are sometimes raised, on account of the expense of making the forged ears, *C*; so that, while we prefer the forged ears, we have designed a substitute for them. The ears are not expensive when made by a workman accustomed to such shapes, but the places where this setting is in demand are usually remote from shops where such work is done, and it is generally the case in such places that the only one at all skilled in metal work is the village blacksmith. The support mentioned can be easily made by such a workman and will be found very satisfactory.

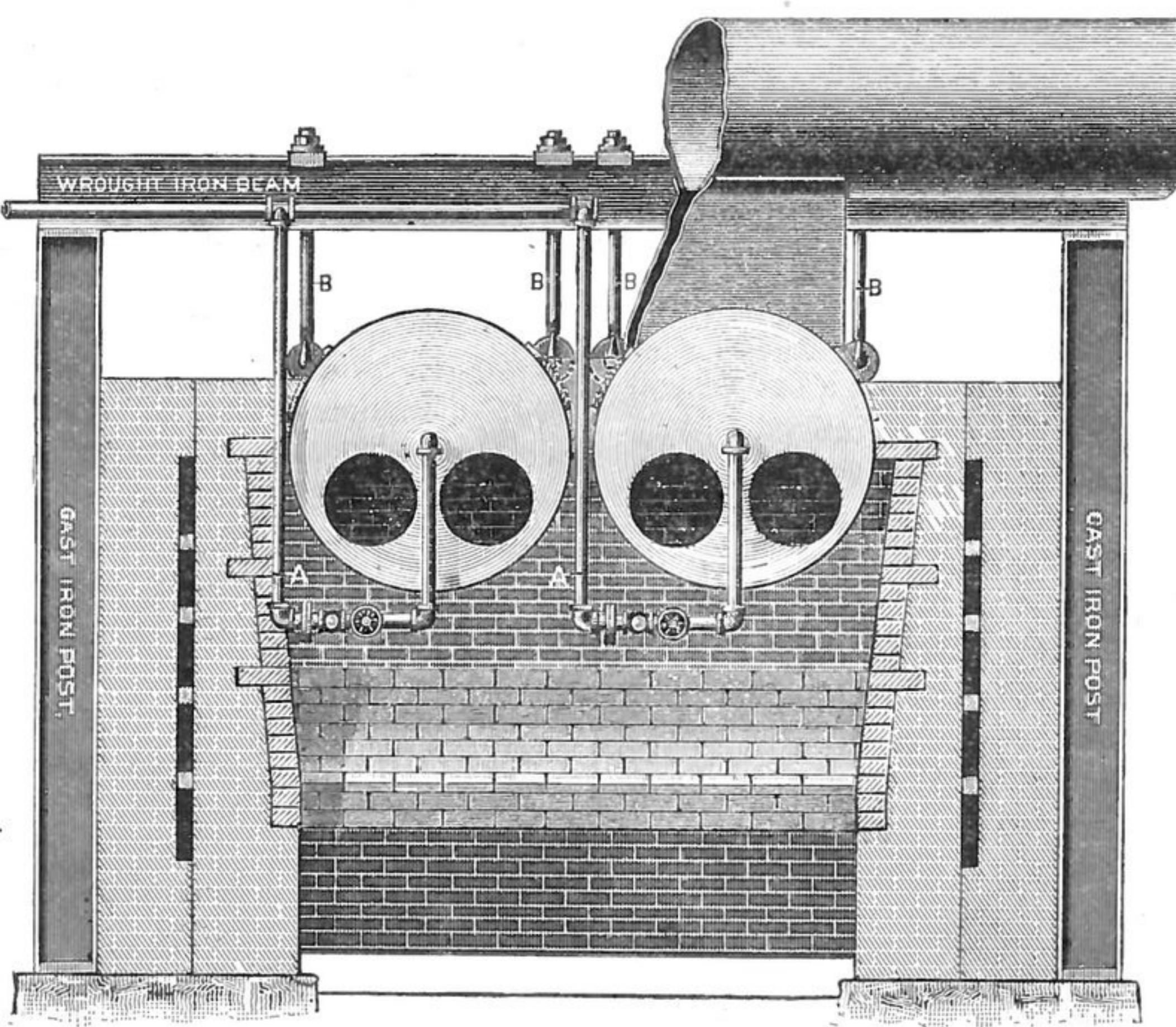


FIG. 1.—SETTING BOILERS OVER A SINGLE FURNACE.

which was a plunger, having an area of ten square inches. Three small grooves were turned in the plunger near its lower end, so as to prevent any leakage of the oil with which the cylinder was partly filled. Two holes were drilled in the cylinder near the bottom, and a steam-gage and an indicator cord was attached to the hub on the shaft of the quick-return motion lever, in order to obtain diagrams of consider-

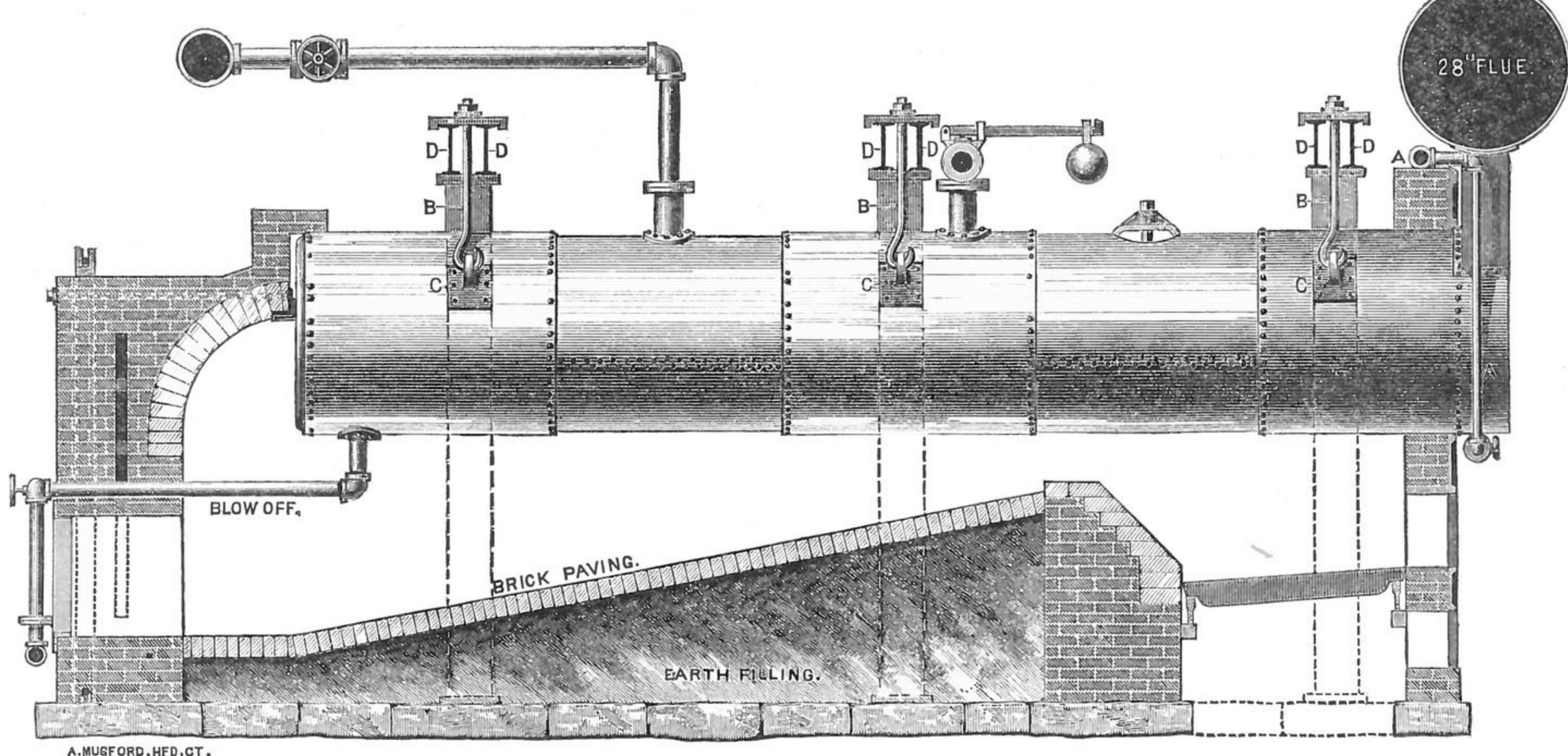


FIG. 2.—SETTING BOILERS OVER A SINGLE FURNACE.

A A, feed pipe; *B B*, hangers; *C C*, forged ears; *D D*, wrought iron beams.

filling of cut brick, which rests against both boilers in the manner indicated in Fig. 1 and prevents the products of combustion from escaping between them. A single wide grate extends entirely across the furnace, making it possible to burn slabs and other long pieces that would otherwise have to be sawed. The closeness of the boilers makes it difficult to put in the feed-pipe, *A*, in the way that is usually

able length. When the piece to be drilled was resting on the plunger, a diagram could be taken which would show the pressure exerted in forcing the drill through the work. With one-quarter inch twist drill the greatest downward pressure was 400 pounds; with one-half inch 900 pounds; with three-fourths inch 1,100 pounds; with one-inch 1,450 pounds, and with one and one-fourth inch 1,800 pounds.

THE MILWAUKEE CONVENTION.

Following is the official announcement of the programme of the convention of the Millers' National Association, to be held in Milwaukee, Wisconsin, in June, sent out by Secretary S. H. Seamans, of Milwaukee, under date of May 13:

The annual convention of the Millers' National Association will be held at Milwaukee, Wis., on the 11th, 12th and 13th of June next, with head-quarters at the Plankinton House. Separate meeting places will be provided to the extent required for spring and winter wheat millers, and it is desired that all sectional and local organizations, as also individual millers who appreciate the advantage of association, attend and by counsel and presence in numbers do their fair share towards improving the milling business. The usual reduction in railroad fares will be arranged, and three or four days in the beautiful and hospitable city of Milwaukee, during the most delightful season named, can be pleasantly as well as profitably employed. The executive committee will meet on Monday, June 10, at the Plankinton House. The following have been suggested as appropriate subjects for consideration:

1. Organization to include as National:
 - (a) The spring-wheat mills organizations.
 - (b) The winter-wheat mills organizations.
 - (c) Foreign and domestic crop information exclusively for members.
 - (d) Delegation to international congress of millers.
 - (e) Reform of export bill of lading.
 - (f) Order bill of lading.
 - (g) Sales only for cash.
 - (h) All flour to bear maker's name and location.
 - (i) Form of domestic sale contract.
 - (j) Methods of sale and rates of commission or brokerage.
 - (k) Reports on standing and conduct of buyers and brokers.
 - (l) Wheat inspection and elevator customs.
 - (m) Uniform weights of sack packages.
2. Limiting production.
3. Establishing from time to time minimum prices.
4. Systematic canvass to induce millers to join respective associations.

If the result of intelligent discussion on these and other matters which may be presented take the shape of agreements binding individuals, rather than as heretofore mere expressions by resolution, the effect of our meeting can not fail to be beneficial to the milling business.

C. H. SEYBT, Pres't.
S. H. SEAMANS, Sec'y.
ALEX. H. SMITH, Chairman Ex. Com.

CONTEMPORARY COMMENT.

"Bradstreet's" chief contention, in fact the only point upon which it now bases a serious defense of "Daily Business" accusations, is a disclaimer of any pretension to supply what in truth it makes its chief glory on the first of every month—"the stocks of grain and flour out of farmers' hands (east of Rocky Mountains and Canada.)" The italicized words are the stereotyped headlines over its monthly compendium. "Bradstreet's" has for years been vaingloriously boasting monthly that its totals represent practically all the grain out of farmers' hands within the geographical limits above pointed out, and "Daily Business" asserts bluntly that the assertion is false: that they are "but rude and useless approximations," and that, while embracing a few unimportant points in addition to those included in the visible supply statements of the New York and Chicago Boards of Trade, they add nothing to the value of the latter. On the contrary, they are misleading and mischievous in their vaunted thoroughness, a quality to which the other compilations referred to make no pretensions. Let "Bradstreet's" speak

for itself. On April 20 it blows hot, claiming that its totals "are the only ones which pretend to include practically all the stocks of moment out of farmers' hands," and on May 4, with the lack of memory which is necessary to the make-up of a first-class liar, it blows cold and says; "Bradstreet's" has never claimed to 'give the stocks * * * out of farmers' hands' throughout all the 'North American continent east of the Rocky mountains,' nor has it pretended to embrace that 'region.' It gives stocks each month at various points of accumulation, which are always specified, and has never claimed to include any stocks other than those specified." Its self-contradiction is so transparent that were "Bradstreet's" any thing but the self-conceited Turveydrop it is, it would feel humiliated. It comes to this, then—"Bradstreet's" makes no claim to represent by its monthly totals *practically all the grain out of farmers' hands* embraced within the limits claimed by the headlines of its compilation.—*Chicago "Daily Business."*

Until the northwest gets a little more sense in its head than to believe that each feather on a stump is a duck's nest, it would be better for it not to attempt the control of the world in wheat speculations. By its suicidal policy of maintaining wheat prices from no better consideration than unmixed stubbornness, it has sacrificed its prestige, gained by years of toil, and has set the world to wondering if after all its former success was not due more to stupendous blundering than to good business tact.—*Minneapolis "Market Record."*

The Ennis, Tex., Roller Mill Co., capital stock \$15,000, has been incorporated by P. Freeman and others, to build a mill.

SPECIAL NOTICES.

LIBERAL OFFER.

With a view of increasing our subscription list, we will send a copy of R. J. Abernathey's new book, "The True Short System" (Price \$2.00) and "The Milling World" for one year at the very low price of Two Dollars. Renewal will be treated same way. This offer will only continue for a limited time. Now is your chance. Send in your subscriptions at once.

Address,
THE MILLING WORLD, BUFFALO, N. Y.

BOLTING CLOTH.

Do not order your cloth until you have conferred with us. It will pay you, both in point of quality and price. We are prepared with special facilities for this work. Write us before you order.

CASE MANUFACTURING CO.

Columbus, Ohio.

Office and Factory, 5th Street, north of Naughton.

TOLEDO MILL PICKS AND STONE TOOL MFG. CO.

Manufacturer and Dresser of

MILL PICKS.

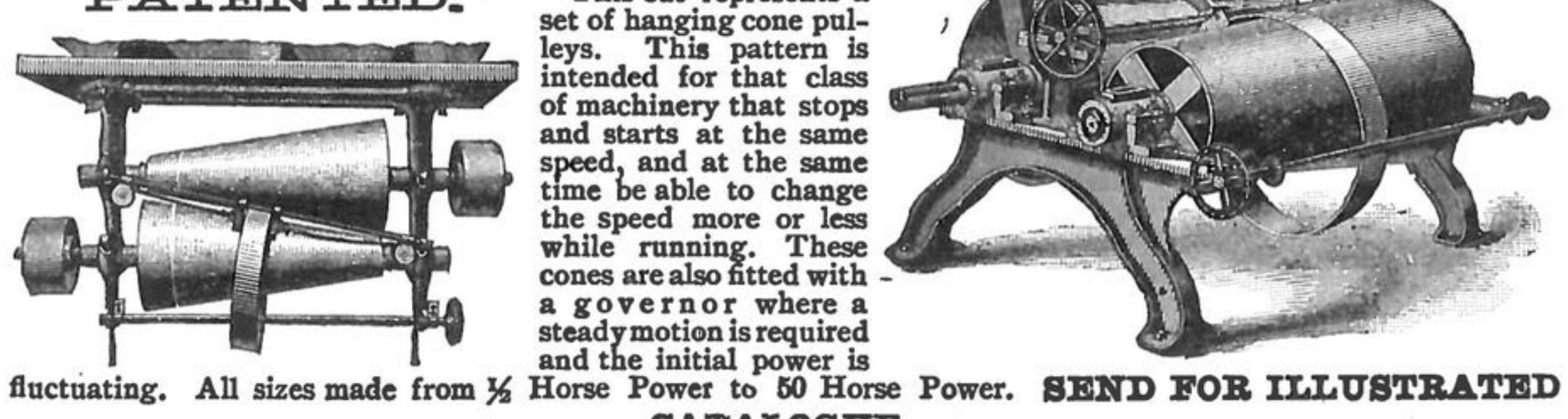
Made of the best double-refined English cast steel. All work guaranteed. For terms and warranty, address, GEO. W. HEARTLEY, No. 297 St. Clair Street, Toledo, Ohio. Send for Circular.

N. B.—All Mill Picks ground and ready for use (both old and new) before leaving the shop. No time and money lost grinding rough and newly dressed Picks. All come to hand ready for use.

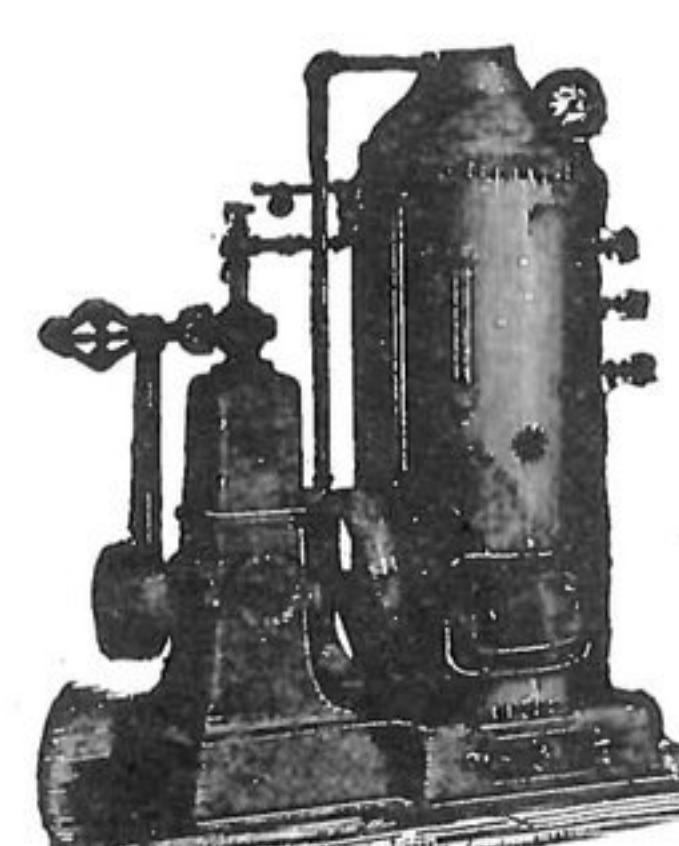
ALSO MANUFACTURERS OF
Shafting, Pulleys, Hangers, Coupling, Machine and
Jobbing, Etc., Etc.

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DURABLE,
ECONOMICAL,
NOISELESS,
SELF-LUBRICATION,
LOW-PRICED.

One and two Cylinder Engines, with vertical or horizontal boilers, are running 2 years without using a wrench on them.

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CASTLE ENGINE WORKS
INDIANAPOLIS, IND.



ARTIFICIAL BOARDS.—A Swiss inventor has perfected a method of making artificial boards and is advocating their use in building. They are made of a mixture of plaster-of-Paris and reeds pressed into shape by hydraulic process. The material has the advantage of incombustibility and lightness and will resist the warping action of atmospheric changes.

INVISIBLE LACQUER.—"Ardenbrite" is a new invisible lacquer recently introduced into London. It is so strong as to withstand weather, steam, smoke, sea air or sea water; and gold, silver, copper, steel, brass or iron does not tarnish when coated with it. As it is so fine as to be unseen on the most delicate instruments, the new lacquer has an extensive field of application.

GENERAL NOTES.

BENJAMIN JOHNSON owns a farm in Rush Valley, U. T., upon which he has just discovered a mine of natural shoe-blacking. An analysis of this peculiar material shows that it contains 16 per cent. carbon, 34 per cent. aluminum, and the remainder clay. When taken out the material is moist and soft, and when used as a shoe-blacking produces a fine polish, which is not easily destroyed.

MILLING MACHINERY DESTROYED.

Columbus, Ohio, was the scene of a destructive conflagration on Friday night, May 10, when the extensive establishment of the well-known Case Manufacturing Company was burned with adjoining property. The fire broke out at 8 o'clock and under a brisk wind spread rapidly, soon destroying the Case block and passing to the surrounding buildings. The fire originated in a part of the Case block occupied by Burch & Collin's foundry. The Columbus "State Journal" in its report of the fire says: "The destruction of the extensive and prosperous works of the Case Manufacturing Company on North Fifth street is a serious blow to the enterprising gentlemen who have built up the establishment, as well as to the large number of skilled mechanics who were employed. The works were established in 1879 by Mr. J. M. Case, who recently retired from the company and is now in Europe. The establishment at that time was operated on a small scale on West State street. The late Otway Watson soon joined Mr. Case in the business, and more recently a company was organized with a capital of \$100,000, with Colonel James Watson president, Hon. John F. Oglevee vice-president and David Greene, son of the late M. M. Greene, secretary and treasurer. The widow of the late Otway Watson, D. K. Watson, Charles E. Burr and Mr. Brown, who traveled in the interest of the institution, were the more prominent stockholders. Their line of manufacture was of such a character that it was a success from the start, for the reason that the company devoted itself to the manufacture of one line of goods, that of milling machinery for the manufacture of flour and corn-meal, and their patents were of such a valuable character that the trade soon grew to large dimensions and ramified to all parts of the country. Europe and Mexico and other countries were being worked in the interest of the trade with considerable success. The business had been on such a boom and the order-book had filled up so rapidly recently, that among the most prominent items of loss for which the company can secure no remuneration will be that of the trade. Some idea of the extent of the business and the demand for the goods can be gained from the fact that nine car-loads were standing on the tracks, ready to be shipped, and a large supply was in a finished state in the building ready to be placed on the road for its

destination. There were on hand orders for the complete machinery for twenty or more mills in different parts of the country, which were ready to go into operation, and the company was making extra efforts to meet these orders.

"The company was fortunate in saving a large portion, if not the most important, of all their patterns, which were at the Schilling foundry, where this part of their work has been done. In addition they saved all their valuable papers and books, which will be of great value to them. The company has operated on a safe and conservative basis, refusing even to purchase real estate and construct buildings of their own, preferring to operate in leased property. The building was formerly occupied by the Harrison Pump Company and was in the hands of Mr. J. W. Dann as receiver and treasurer. The company had an excellent opportunity to purchase the property about four years ago at nearly what the actual loss will be at this time, but they refused it, preferring a lease. As a consequence they will not lose in this direction. It is safe to estimate that, taking all parties concerned, the loss will be somewhere between \$60,000 and \$75,000. On the first floor of the Case Manufacturing Company building there was an immense amount of valuable machinery, including 11 lathes, 2 corrugating machines, 7-drill-presses and 3 emery-grinders. The carpenter work was done on the second floor. Here a large quantity of valuable tools belonging to the workmen was destroyed. About 100 men worked in the establishment. A large number of them had kits of tools worth from \$25 to \$200 each. The interest of the Case Manufacturing Company was insured for \$25,000 in fifteen or twenty companies, represented by about half a dozen local agencies. The companies holding the insurance of the Case Manufacturing Company included the following agencies: Fleck & Standish, H. Bancroft, S. M. Shedd & Son, Charles Bedwell, John H. Grove. Flick & Standish had \$9,000 on the contents of the warehouse, the factory, office and lumber, with the following companies: Queen of England \$3,000, Northern of England \$2,000, Amazon of Cincinnati \$2,000, Michigan of Detroit \$2,000, and \$500 with Northern of England on stable, horses and feed. There is \$8,000 on the Case Manufacturing Company in Bedwell's agency as follows: Fire Association, Philadelphia, \$2,000; Western Assurance, Toronto, \$2,000; German American, New York, \$3,000; Empire State, Rochester, N. Y., \$1,000."

The Case Manufacturing Company will go right on, despite the heavy loss caused by the fire. Under date of May 13 they write to THE MILLING WORLD concerning their plans as follows:

"We have secured temporary shops and will soon be turning out machinery as fast as ever. Our order-book is filled with orders, and we hope to get them out with but little delay, and we will take care of all new orders that come our way. All our most valuable patterns, plans and flow-sheets were saved."

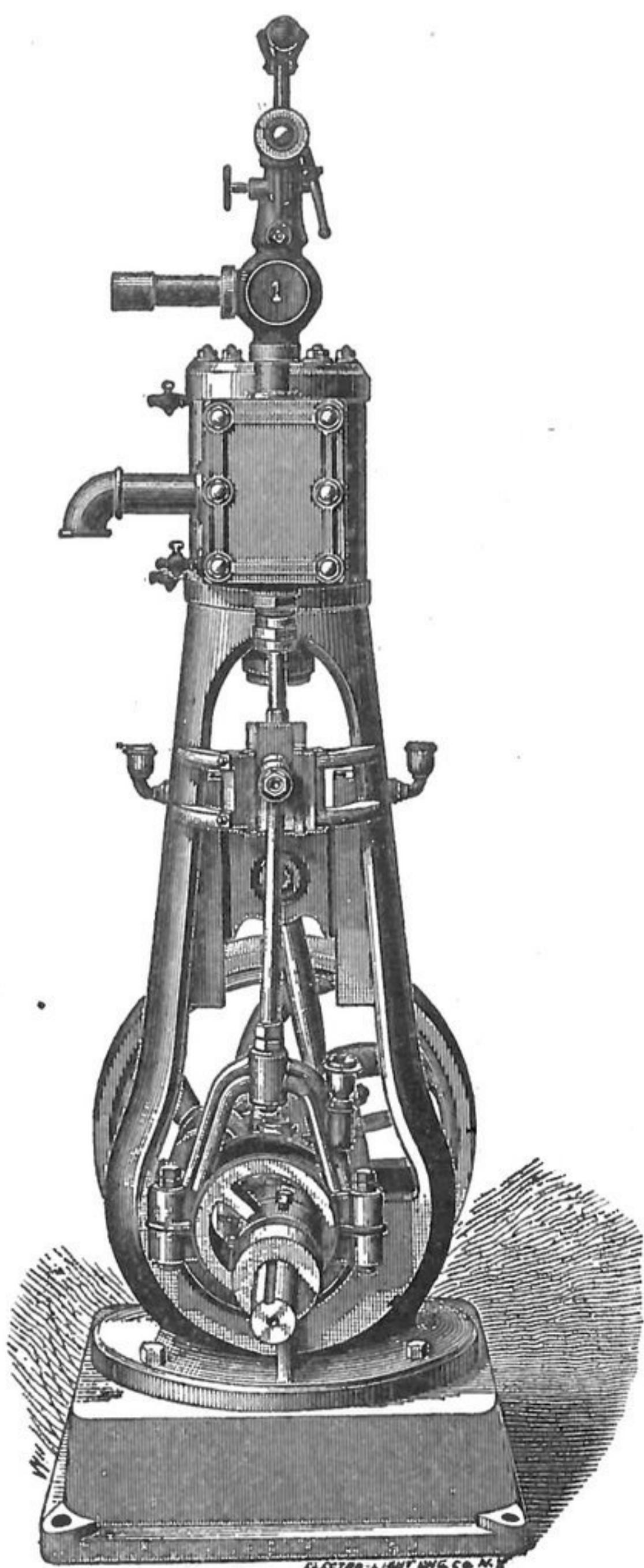
The numerous patrons of this most reliable and enterprising firm will be pleased to know that the Case Manufacturing Company propose to go on just as though such a thing as a fire had never been mentioned in Columbus. The milling fraternity could not well dispense with the Case machines, and millers everywhere will extend sympathy for the company's loss, together with congratulations over their pluck, perseverance, indomitable courage and enterprise.

FREDERICK T. ROBERTS, M. D., Professor in University College, London, Eng., Examiner in Medicines, Royal College of Surgeons, says in reference to advanced kidney disease: "Complications are met, such as consumption, heart disease, morbid conditions, liver affections. Warner's Safe Cure cures these affections by putting the kidneys in a healthy condition, thereby enabling them to expel the waste or poisonous matter from the system."

BOOKS AND PAMPHLETS.

The Avery Stamping Co., of Cleveland, O., have issued a neat vest-pocket price-list, "daily reminder," memorandum and cash-book combined, designed for the use of traveling salesmen, which every traveling man ought to have. Address the firm for copies.

AUTOMATIC VERTICAL ENGINES



Especially adapted for Small Electric Light Plants. Perfect Regulation. Reversible Link Motion for Marine Use. Five to Fifteen Horse Power. Also manufacturers of

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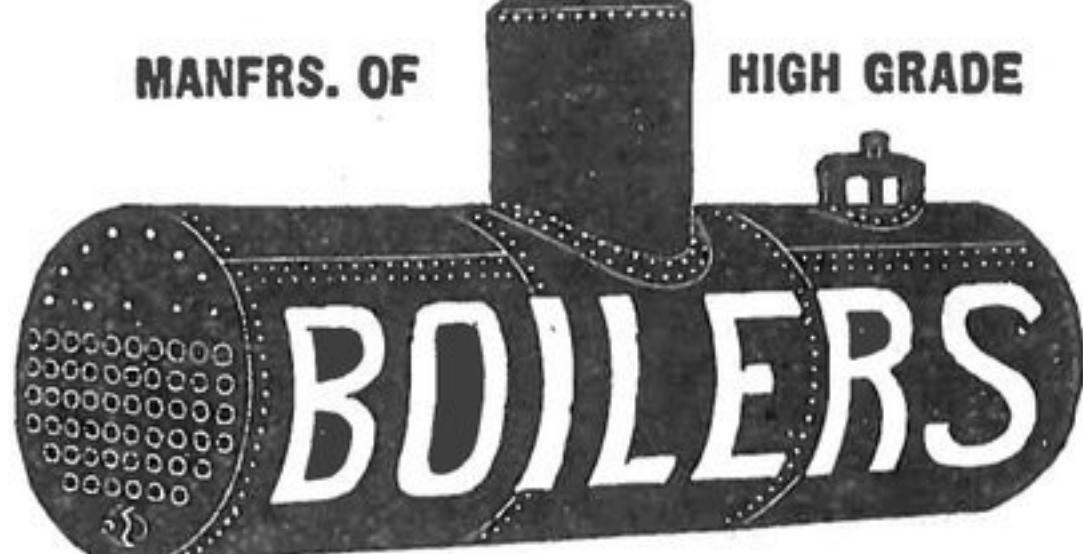
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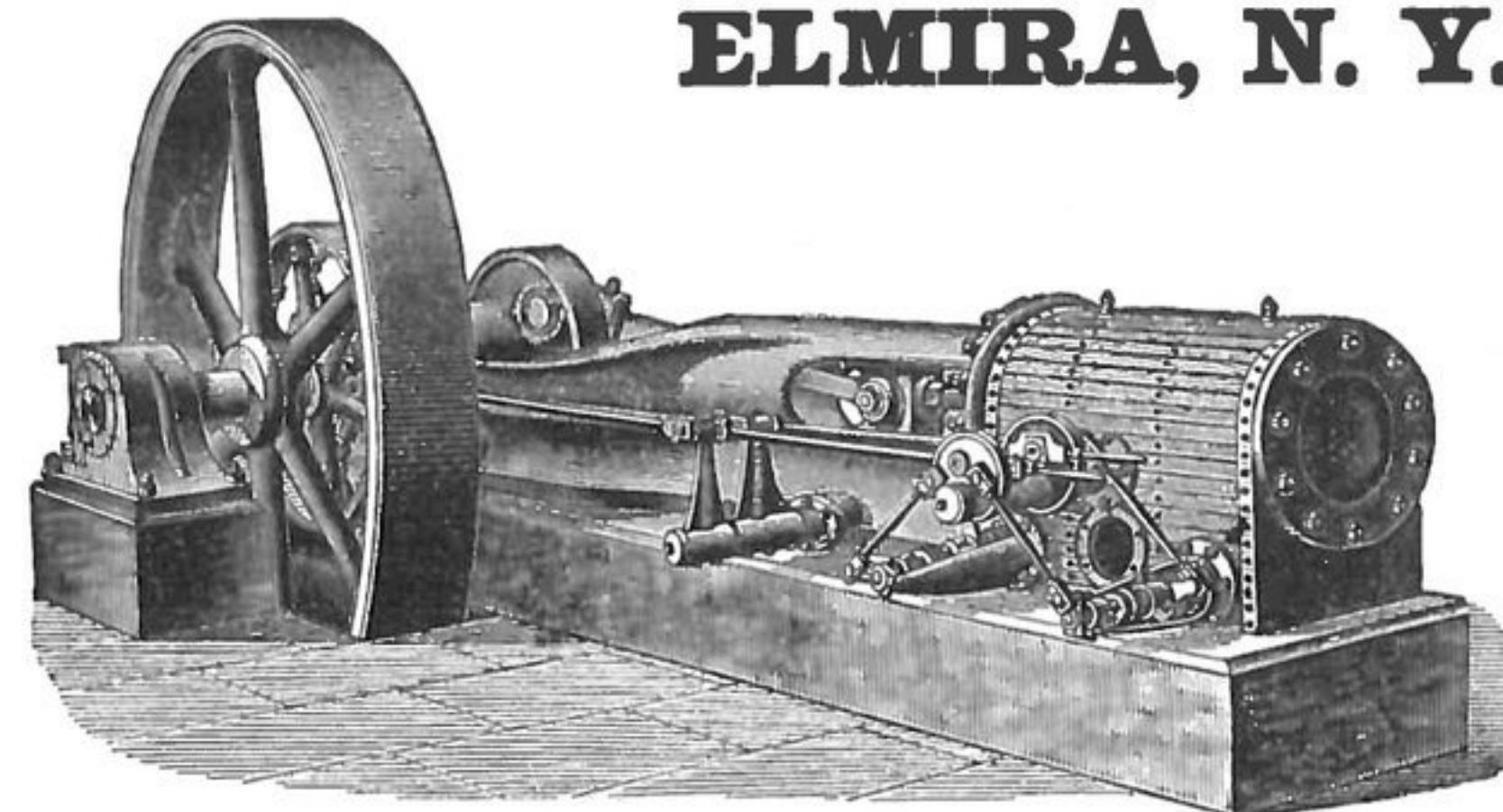
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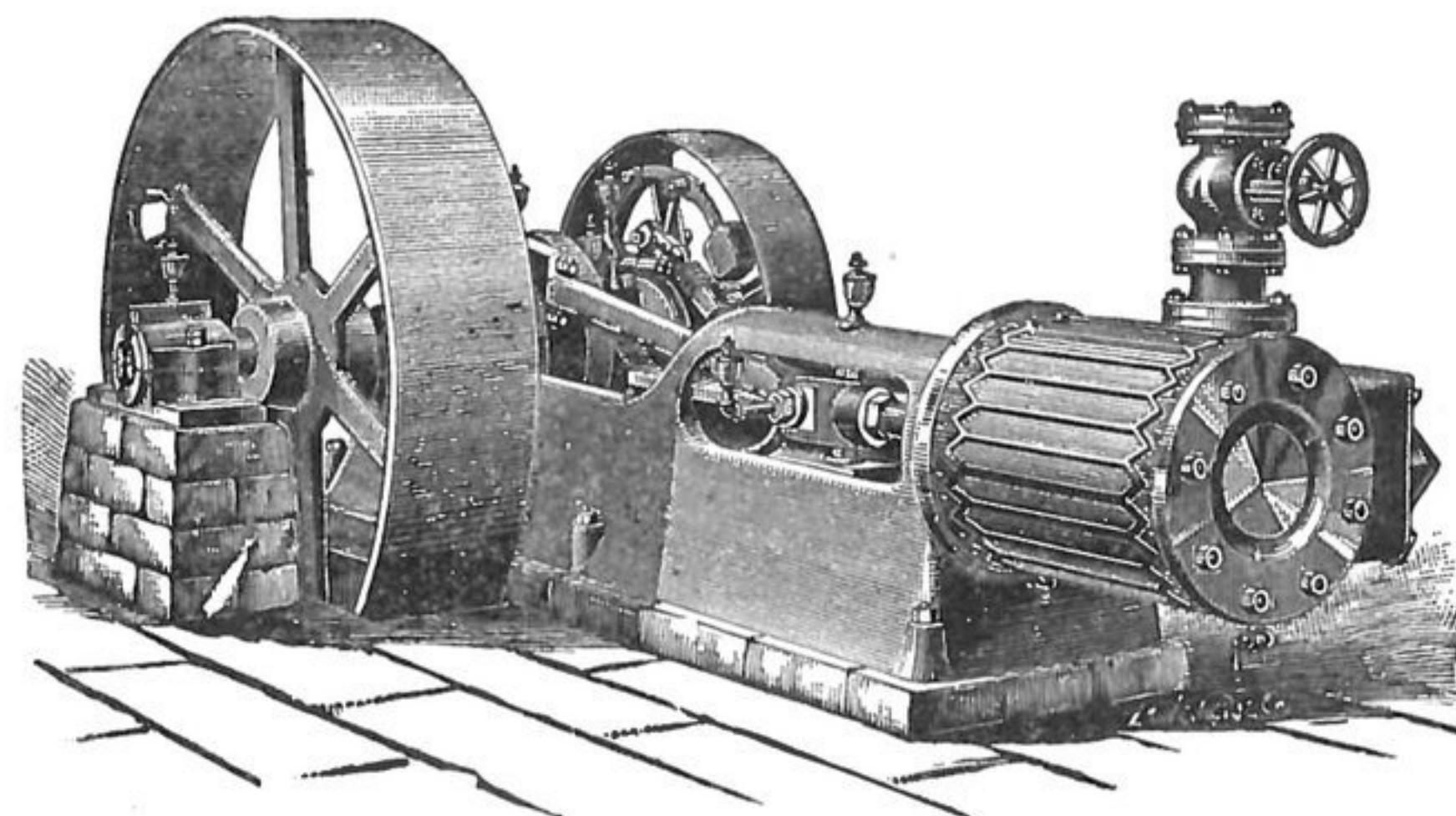
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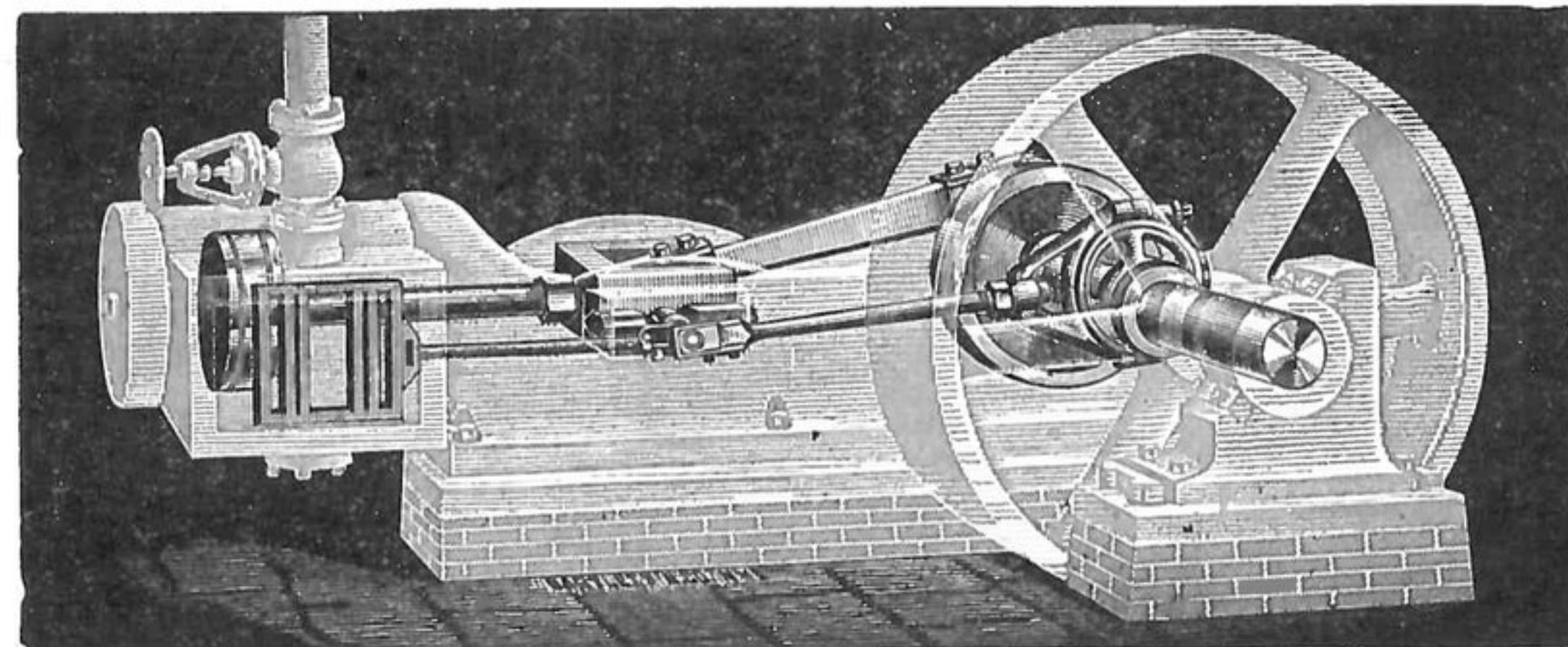


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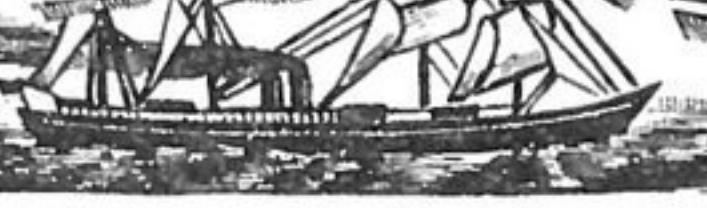
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NOTES & NEWS



Page, Kan., men build a flour-mill.
 O. Laws, miller, Dover, Del., is dead.
 Hoxie, Kan., men project a flour-mill.
 Putnam, Tex., men project a grist-mill.
 Alta Vista, Kan., men project a flour-mill.
 The Stanton, Ill., Mill Co. want machinery.
 Wm. Rakow, miller, Primrose, Ia., is dead.
 J. Crumbacher, Zoneton, Ky., puts in rolls.
 Stevenson, Ala., men project a flouring-mill.
 E. Keeley, Derby, Tenn., builds a roller mill.
 F. J. Long, Athens, Tenn., remodeled to rolls.
 D. H. Houser, Myrtle, Ga., builds a grist-mill.
 Amstutz & Co., millers, Sterling, O., assigned.
 Oberlin, Kan., men project a \$15,000 flour-mill.
 F. Bohlter's mill, Elba, Minn., damaged by fire.
 J. Kirk & Co., Ravenna, O., remodeled to rolls.
 Medicine Lodge, Kan., offers a flour-mill bonus.
 J. R. Shepard's grist-mill, Nameless, Ga., burned.
 J. R. Ainslie, miller, North Scituate, Mass., failed.
 Kansas City men build an elevator at LeRoy, Kan.
 J. R. Roberts, Georgetown, Tex., remodels to rolls.
 Stacy, Lykens & Co., Caney, Ky., build a grist-mill.
 T. J. Elam, Murfreesboro, Tenn., builds a roller mill.
 W. H. Weatherall, Newfield, N. Y., remodels to rolls.
 Kingle & Bradshaw, Waldo, Kan., project a flour-mill.
 J. O. Farrier, Marshallville, Ga., will start a grist-mill.
 The Petersburg, Ky., Milling Co. build a 75-barrel mill.
 Kelley & Lysle, Leavenworth, Kan., rebuild their mill.
 Chas. Phelps, miller, South Deerfield, Mass., is insolvent.
 Kansas City men project a \$25,000 mill at Marshall, Kan.
 T. Rogers' grist-mill, Concord, N. C., burned; loss \$3,000.
 Wm. Hart, Manchester Bridge, Conn., puts in new buhrs.
 Geo. Marks & Co.'s grist-mill, Bruce Mines, Ont., burned.
 Brew, Ellis & Green, Bear Creek, Ala., build a grist-mill.
 The Stevenson, Ala., Land Co. have points on a grist-mill.
 The Forked Deer Roller Mills, Dyersburg, Tenn., enlarged.
 A. Parks, jr., Martinsburg, W. Va., enlarges his flour-mill.
 A. J. McMillan, Hartwell, Ga., starts a corn and flour mill.
 E. G. Bucklin, Vandalia, Mo., builds a 50-barrel roller mill.
 Ritchie & Newcomb, Gladstone, Manitoba, remodel to rolls.
 F. C. Maretz, Reedsville, Wis., builds a 75-barrel roller mill.
 Stephens Bros' grist-mill, Tennille, Ga., burned; loss \$2,500.
 Thon & Hamm, millers, St. Paul, Minn., now Theo. Hamm.
 Wm. Preston, Stratford, Ont., builds a 100-barrel roller mill.
 Dr. Harrison, Neepawa, Manitoba, projects a 125-barrel mill.
 J. J. Rogers, grist-mill, Barnesville, Ga., sold to B. F. Turner.
 J. A. E. Harrah, Blue Sulphur Springs, W. Va., builds a mill.
 T. Monroe & Co., millers, Moravia, N. Y., now W. B. Thomas.
 M. T. Gregory & Co., Milford, Conn., add rye-flour machinery.
 C. C. Ladd, miller, Osceola Mills, Wis., now the Osceola Mill Co.
 G. H. Gardner & Bro., Litchfield, Ky., remodel to 75-barrel rolls.
 The "Wheeler's," Christmasville, Tenn., build a 40-barrel roller mill.
 Black & Robertson, Crystal Falls, Tex., build a 25-barrel roller mill.
 J. R. Yost, Holbrook, Kan., wants estimates on building a roller mill.
 The Texas Standard Cotton Oil Co., Brenham, will build a roller corn-meal mill.
 The Chestnut Mound Roller Mill Co., Elmwood, Tenn., build a 55-barrel roller mill.
 Miller, Case & Clausen, millers, New York, N. Y., dissolved, H. E. Case retiring.

C. F. Johnson & Co., Marshall, Minn., build a 200-barrel steam roller flouring-mill.

Wm. Rieker & Co., millers, Cincinnati, O., dissolved, Fred Kirchner withdrawing.

R. N. Walter & Co.'s mill, Nashville, Tenn., burned; they will probably quit business.

Elliner & Walker, Lewisberg, Kan., will remodel and operate the old Riffenberg mill.

R. L. Scearce & Co., Moscow, Ky., start a 70-barrel flour-mill, with a corn-mill attached.

The Enterprise Flouring Mill, St. Jacobs, Ill., burned; loss \$25,000; cause of fire unknown.

Crary, Hall & Co.'s large grist-mill, Hancock, N. Y., burned; loss \$25,000; insurance \$12,000.

The Wichita, Tex., Roller Mill Co., capital \$50,000, has been recently organized, to build a mill.

J. A. Melton & Co., Gamble's Store, N. C., want flour and grist-mill machinery for a new mill.

The Fort Smith, Ark., Milling Co., recently incorporated, will build a 125-barrel roller flour-mill.

Burns & Co., St. Jo, Mo., build a \$45,000 roller mill, capacity 250 barrels, to grind the next crop.

Roots & Co., millers, Cincinnati, O., move to Lawrenceburg, Ind., and enlarge to 1,200-barrel capacity.

The Covington Flouring Mill & Elevator Co., Covington, Tenn., are building a large mill and elevator.

Killarney, Manitoba, has granted a \$2,000 bonus to a miller from Sydenham, Ontario, to build a mill.

F. Dittes, will buy, remodel and operate the 300-barrel mill of the St. Paul Trust Co. at Gracieville, Minn.

Luck & Converston, Eagle Ford, Tex., will build a roller corn-mill, 50-barrels capacity. Machinery is wanted.

Wm. Chaffin & Co., Campbell, Tex., have enlarged their flour-mill and added corn-mill and other machinery.

The Guggenhuller Milling Co., St. Jacob, Ill., now the Citizens' Milling Co.; they want prices on bolting-cloths.

J. A. Dubois & Co., Sauk Center, Minn., bought the McClure mill, elevator and water-flowage right for \$40,000.

R. G. Brodie and others, Emporia, Kan., incorporated the Western Mill Co., capital stock \$60,000, to build a mill.

J. M. Gambill & Co., Roanoke, Va., build a 100-barrel roller flour-mill, a 600 bushel meal-mill and 1,200-bushel feed-mill.

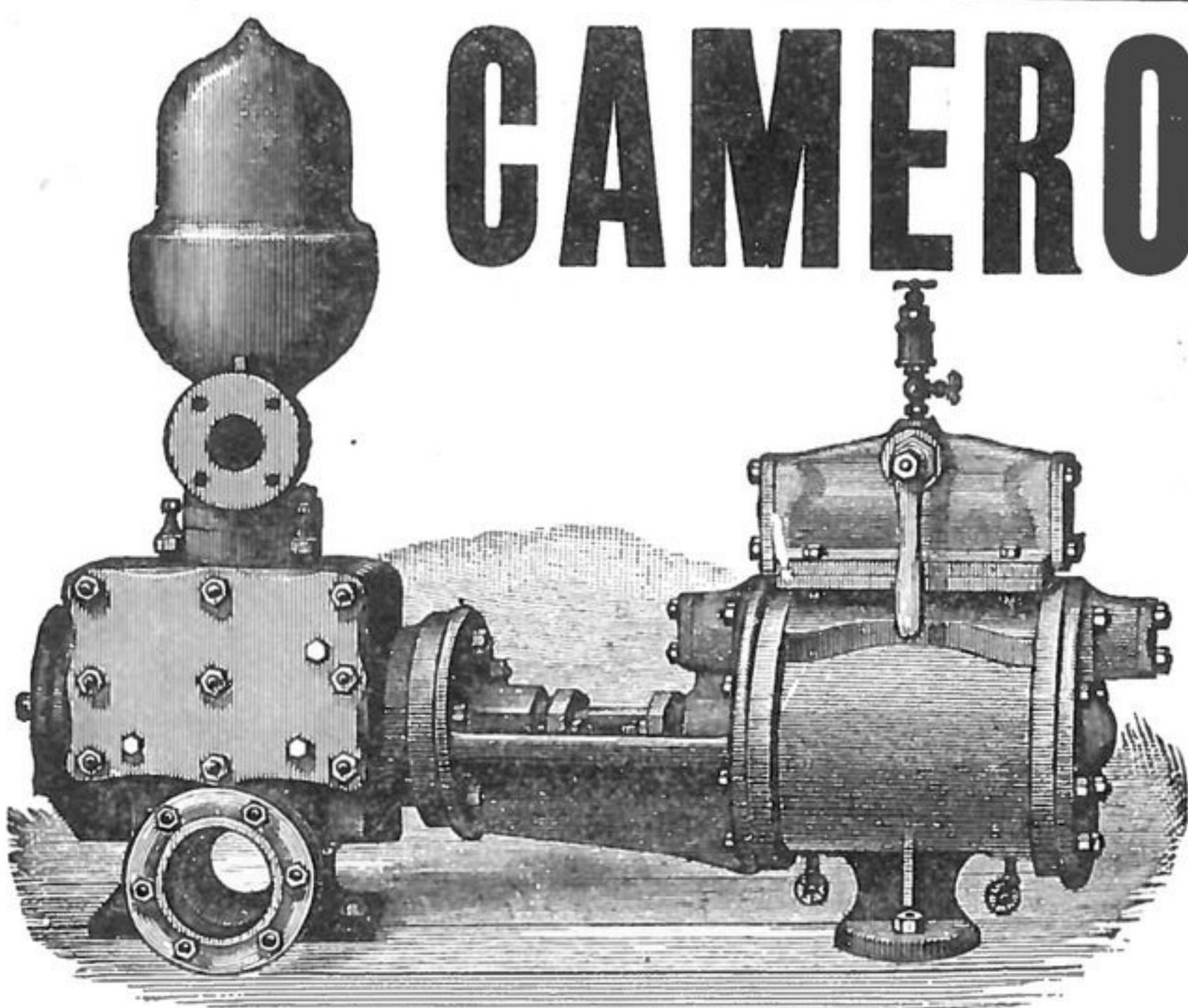
The J. B. Allfree Co. report sales of "Keystone" rolls to Mr. Bodgers, Judson, Ind., horizontal bran-duster to Meek, Finger & Co., Marissa, Ill., "Success" bolters to Crescent Milling Co., Hopkinsville, Ky., Allfree sieve-scalpers to Waters & Manakee, Burnt Mills, Md., F. Thoman & Bro., Lansing, Mich., and Richardson & Evans; one "Success" bolter to the C. A. Gambrill Mfg. Co., Baltimore, Md.

The J. B. Allfree Co., Indianapolis, Ind., have taken contract for a 30 to 40 barrel mill, in which are to be used the "Keystone" rolls, "Success" bolters, "Climax" bran-duster and Allfree sieve-scalper and flour-packer.

The J. B. Allfree Co., Indianapolis, Ind., have received a contract for a 50-barrel mill from E. A. Stevens, Northville, Ills., who will use the "Keystone" rolls, "Success" bolters, Allfree centrifugal reel, &c.

The J. B. Allfree Co., Indianapolis, Ind., report sales of special corn-meal-milling machinery as follows: One three reduction corn-mill to the Richwood Milling Co., Richwood, Ohio; huller and pearly to Geo. Schroth & Co., Sacramento, Cal.; one to Halsey & Boyson, Galveston, Tex.; one corn-bolt, purifier and aspirator to J. S. Lycan & Son, Marshall, Ills., and one 7x18 four-high corn-mill to the Springwater Distilling Co., Bowling Green, Ky.

R. A. GUNN, M. D., Dean and Professor of Surgery, of the United States Medical College, said: "I am willing to acknowledge and commend thus frankly the value of Warner's Safe Cure." The late Dr. Dio Lewis, writing to the proprietor of Warner's Safe Cure, said, over his own signature: "If I found myself the victim of a serious kidney trouble, I would use Warner's Safe Cure."



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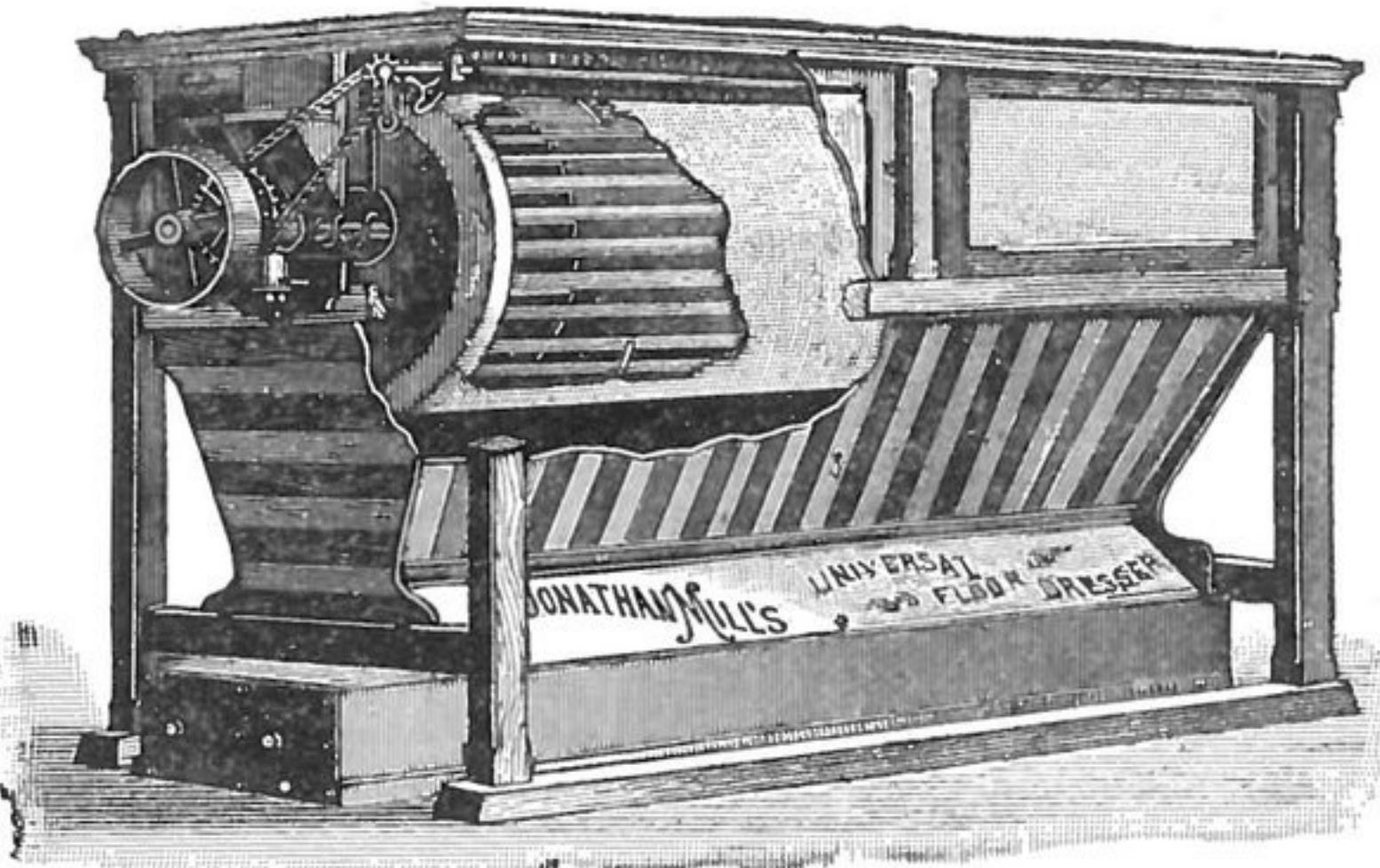
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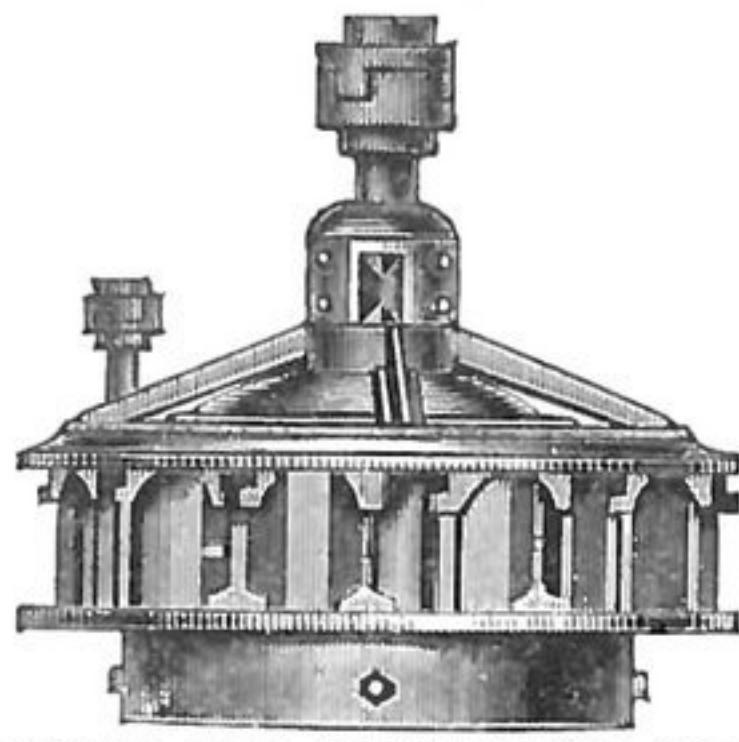
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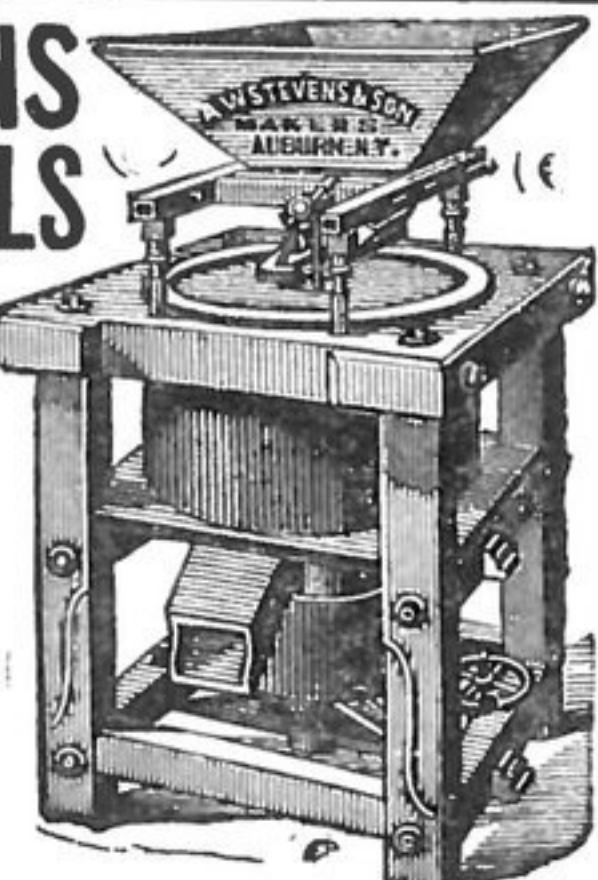
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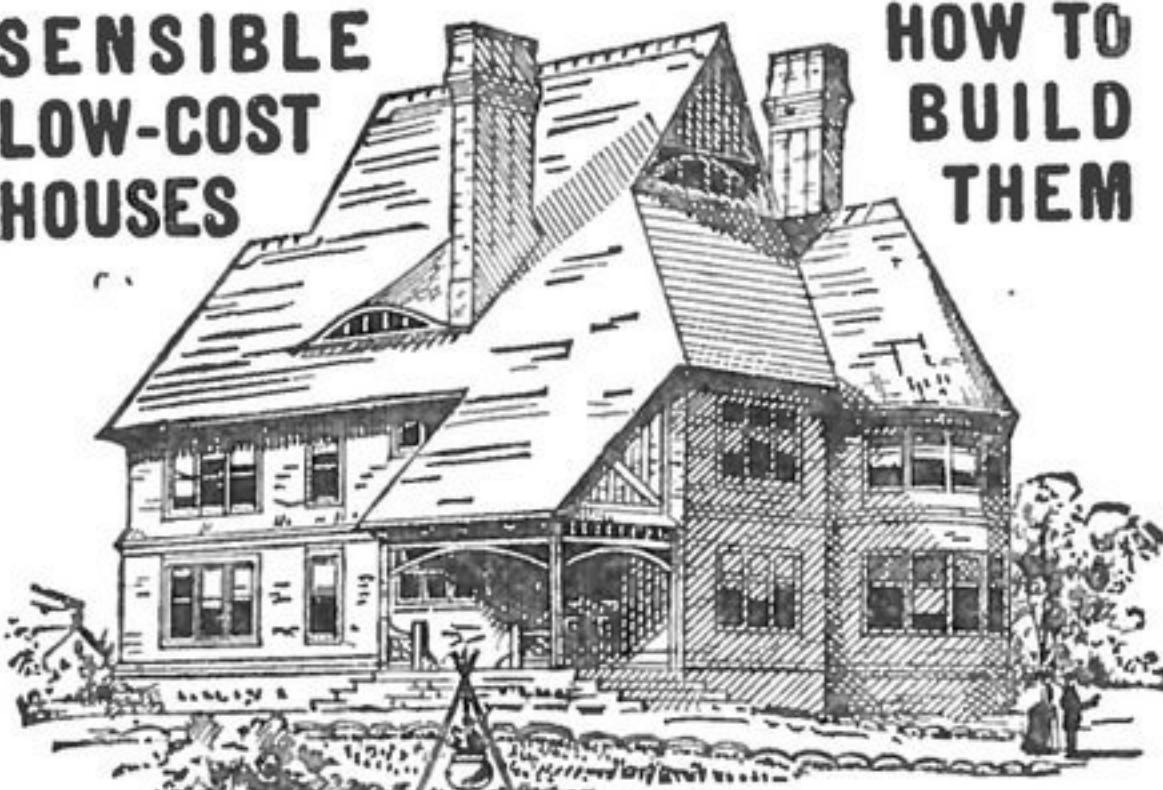
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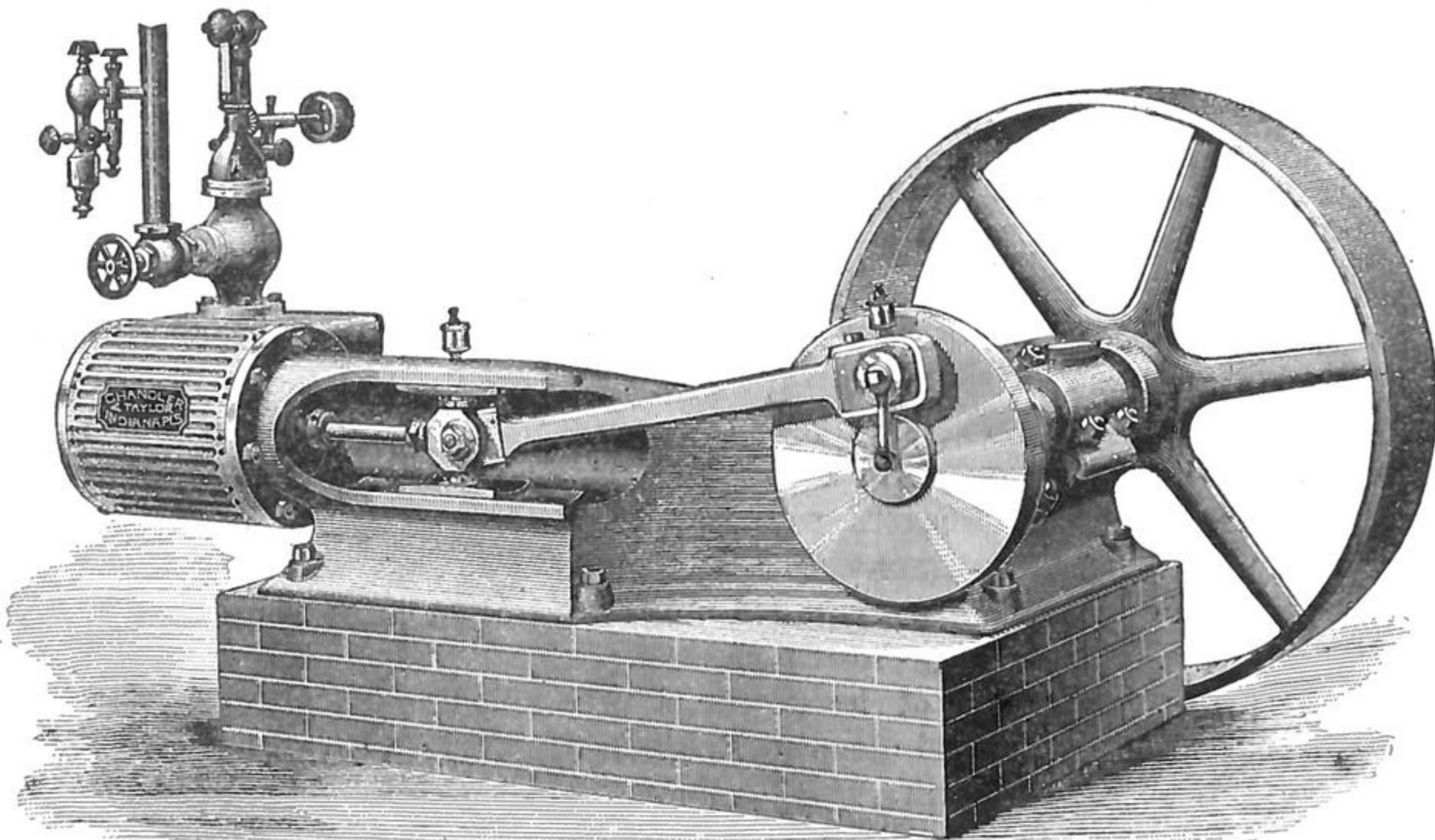
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EUROPEAN ECHOES.

IN France, Germany and Holland the weather has been variable, but on the whole suitable for the development of the crops.

THE most depressing feature in English agriculture is the ruinous low price of grain. Landlords farming their own lands, says the "Mark Lane Express," have balance-sheets showing a loss of over \$15 per acre.

BRITISH Consul-General Sandwith, stationed at Odessa, Russia, in his last report on the agriculture of Southern Russia states that the harvest last year was even larger than that of 1887; but the farmer was unable to take full advantage of it. With acres of waving corn around him, he had neither the hands to reap it, nor were means at his disposal to convey it to market. Machinery has done much to aid him, and the extension of railways has tended to facilitate the transport of produce; but neither machinery nor railways have kept pace with the growth of cultivation. The region lying between Odessa and Nicolaieff, a country of admirable fertility, 12,000 square miles in extent, has not a line of railway and is untraversed by any macadamized road. So great was the demand for labor when the land here was ready for reaping, that wages rose in some instances to 10 shillings a day, the usual scale of pay in ordinary times scarcely averaging 1 shilling. The coal mines in the Donetz basin were abandoned by the miners for the more lucrative employment of the harvest field; but, in spite of the extra supply of labor, it proved quite inadequate to the demands made upon it, while the rolling-stock fell far short of the requirements of the moment, and the enormous distances to which the grain had in many cases to be carted to the nearest station entailed an expense which swallowed up most of the profits. From these two causes combined, instances occurred of farmers leaving hundreds of acres uncut and abandoned as fodder for cattle. While grain has been pouring into Odessa and has been conveyed to the United Kingdom and the Mediterranean ports by a larger fleet of steamers than ever before visited the port, it is believed that more than a quarter of the crop still remains in the hands of the farmers, and the local granaries are full to overflowing.

FOLLOWING is an extract from a paper on wheat-growing in the Argentine Republic read on the 2d of April by F. K. Smythies before the London Society of Arts: In the Argentine the principal farmers are Italians from Northern Italy, a hard-working, hard-living agricultural race. They go out with little or no capital, but, with the help of their friends out there, they take up 150 or 200 acres of land and build a sod hut and set to to plow up their holding, for which they pay rent in cash or in kind, 10 to 12 per cent. of the crop, or 3 shillings an acre, being the common rental. Women and children all work; one may often see four or five plows in a string. First of all comes a lad of twelve years, with a yoke of oxen and a light plow with a broad share, then a girl a little older, then the old woman (*la vecchia*), and last of all the old man, so that he can keep a fatherly eye on his team, with a double-furrow plow and two yoke of oxen. In this way, without paying any wages, he will turn over about six or seven acres a day, which would cost the English farmer a good deal of hard cash. In harvest time they use chiefly American headers for reaping, with a 16 or 18-foot cut, clearing 30 or 35 acres a day. The wheat passes over an endless canvas band straight into the cart, which moves alongside, and goes right away to the stack, the whole work being done in the most wholesale, expeditious and at the same time economical manner—very different from the English way of doing it. The stacks are made in pairs in the field, and the steam thrasher draws up between them, working first from one side and then from the other. The threshers used are of the largest and most modern make, fitted with straw-burners. Many makers send out machines, so that we have combined all the elements of cheap production, fertile soil, fine climate, cheap land, which in quantity

is practically unlimited, cheap labor, and the most modern and expeditious machinery, and last, but by no means least, we have all this almost within sight of the ocean steamer. Even the large capitalists are giving up growing wheat because they can not compete with the Italians, although they have all the advantages of capital, steam-plows and individual smartness, and grow as much as 13,000 acres of corn under one management. River Plate wheat and maize fetch about the top prices in the European markets, the wheat flour possessing certain qualities of lightness which millers find admirably adapted for mixing with heavier home-grown wheats. The spread of agriculture into the interior is found to improve the climate by increasing the rainfall, as has also occurred in India, and although there are well-known scientific reasons for this, it makes it none the less satisfactory to see it reduced to practice. The agricultural laborer in this country has been taught to consider himself an ill-used, overworked and down-trodden individual. He should compare himself with an Italian wheat-grower in the Argentine, working often 14 or 15 hours a day, and his children as well, and living almost entirely on what he raises, bread and sausage being his idea of gastronomic bliss. The agricultural laborer in England is living on the farmer, the farmer on his capital. Although foreign competition with English farm produce was of very slow growth, those chiefly interested took no efficient steps to meet the difficulty, but waited for something to turn up in their favor; some trusting to protection, others to a foreign war or natural increase of population, and even now those high in authority still talk of the present depression through which agriculture is passing, in face of the fact that here we have a country nearly twenty times as large as England and Wales, the greater part of which is being devoted to raising food for the European market, under conditions which put competition on the part of England out of the question. Land has gone up in value a great deal lately, both in the country and in the towns; but the price is based chiefly on the rental that can be got for it, and it is still much below land in other countries used for the same purposes. Land in Santa Fe has gone up to fifteen to twenty times its value of six or seven years ago, and building land in Rosario has gone up ten times in the last two years. We have many advantages over the United States for raising corn and other produce, as the prairie land is situated on the seaboard and along the Parana, which is navigated by large ocean steamers as far up as Santa Fe, or about 700 miles from the mouth of the river, so that an immense quantity of corn is raised within 100 miles of the ocean and river ports, whereas in the United States most of the corn, being raised in the west, has to be freighted from 2,000 to 3,000 miles overland, which is very expensive.

ST. PAUL grain men have been vexing their souls over a problem touching a grain bin and contents, the solution of which has dawned upon not a few of them. It is thus: Given a bin; dump into it, separately, five distinct qualities of wheat, for instance; open the spout at the bottom, and the query is: "Which layer of wheat comes out first?" The uninitiated say at once, with a few exceptions: "The first layer at the bottom, of course!" W. A. Van Slyke was determined to get at the facts, and watched the bin very closely the other day, after having caused a layer of barley to be placed on top of several layers of different kinds of wheat. The spout was opened, and the barley came rushing out first.

R. A. GUNN, M. D., Dean, and Professor of Surgery of the United States Medical College; Editor of "Medical Tribune" Author of "Gunn's New Improved Hand-book of Hygiene and Domestic Medicine," in referring to the use of Warner's Safe Cure in a case of Bright's disease said, over his own signature: "I was greatly surprised to observe a decided improvement within a month. Within four months, no tube casts could be found, and only a trace of albumen; and, as he expressed it, he felt perfectly well. After this demonstration of its power, I prescribed it in full doses in both acute and chronic Bright's disease, with the most satisfactory results."



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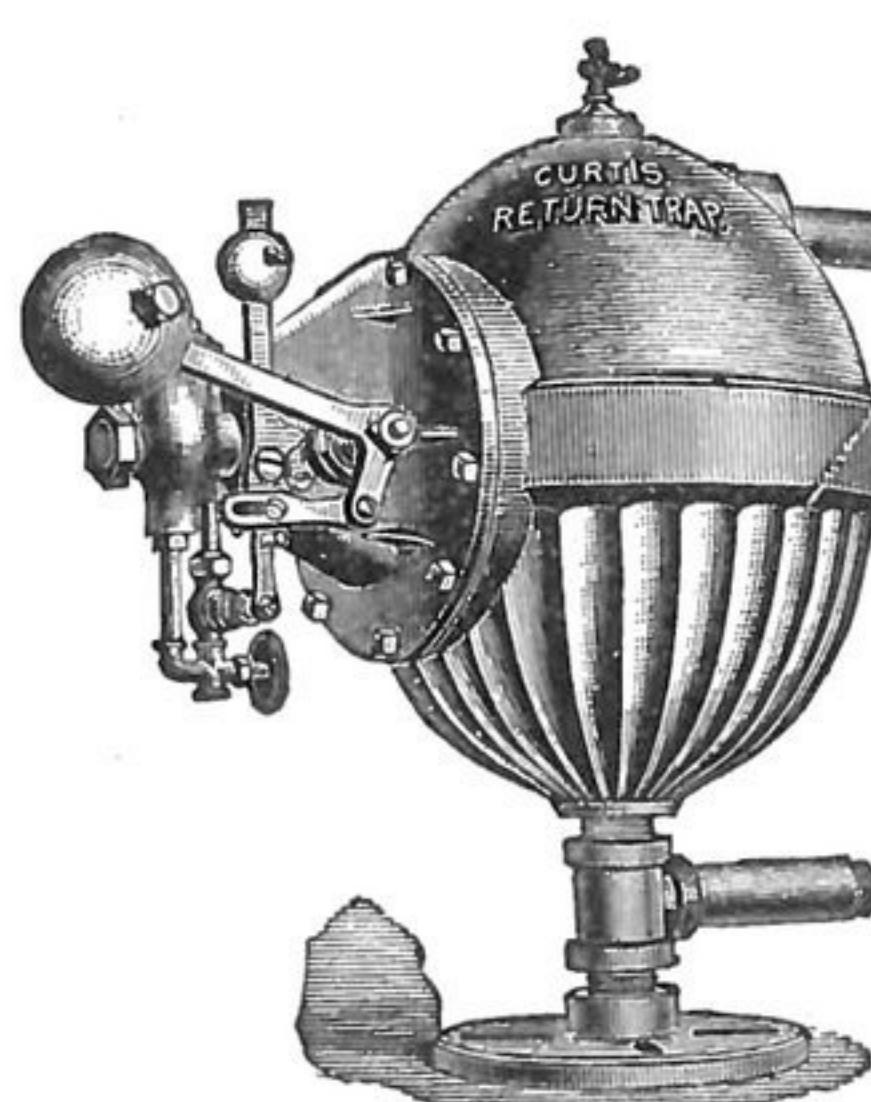
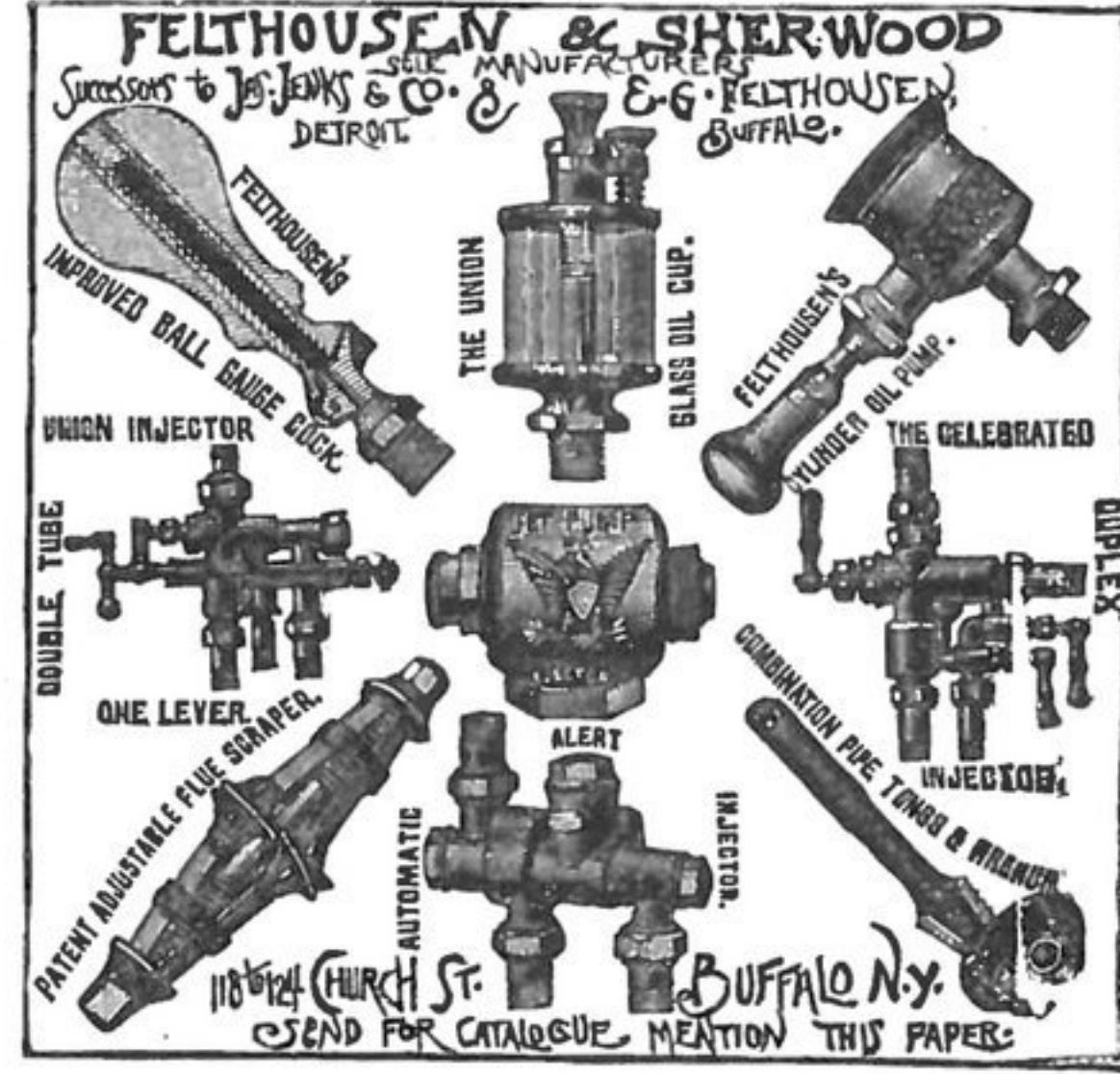
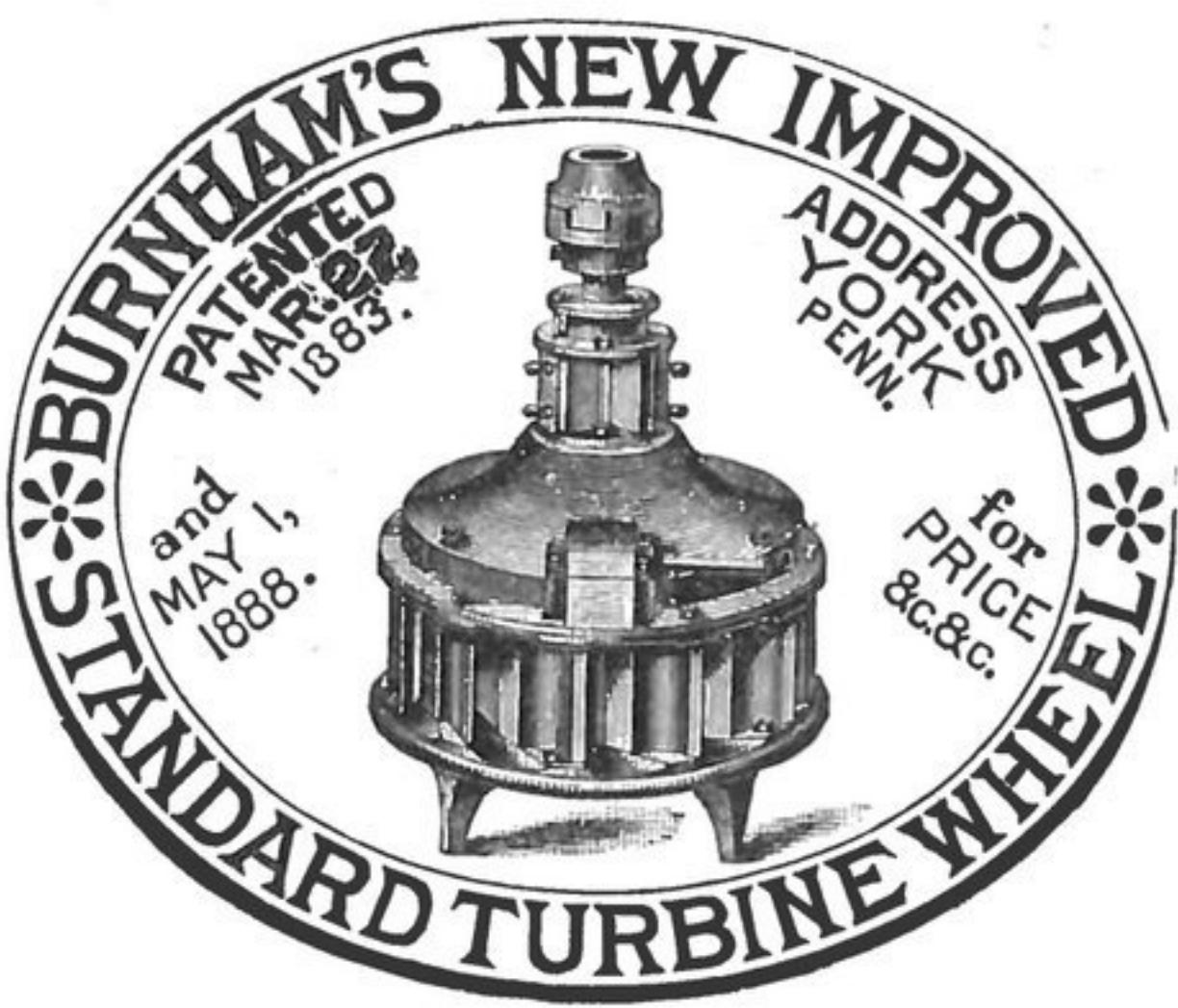
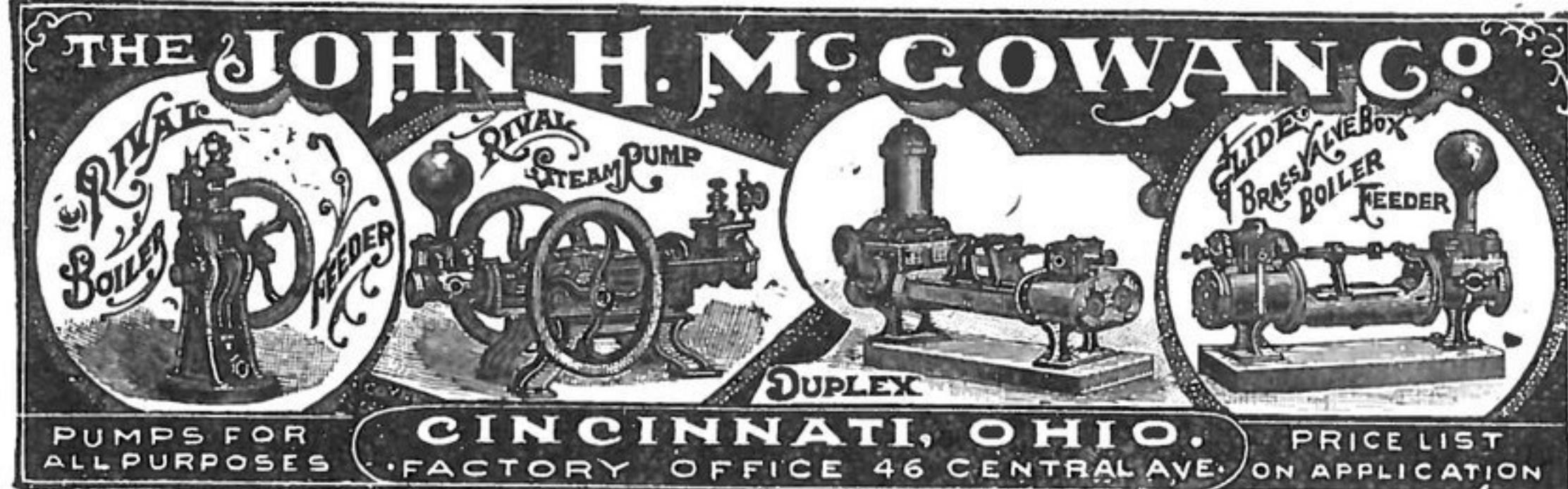
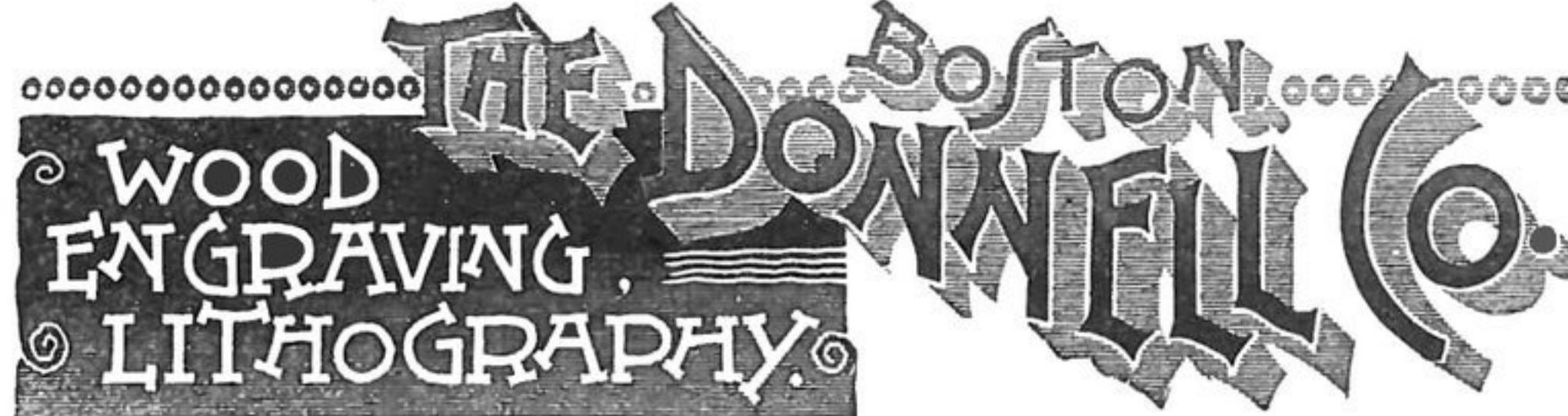
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THE
GRAIN & FLOUR TRADE

OFFICE OF THE MILLING WORLD,
BUFFALO, N. Y., May 18, 1889.

On Friday of last week the opening was weak on reports of general rains in the Northwest, and stronger at closing on denials of the rain reports. May wheat closed at 84½c. Options 1,000,000 bushels. The government crop report included the following: The condition of winter wheat has advanced from 94 to 96; of rye from 93.9 to 96.5. The general average of winter barley is 96.9; of spring pasture 96.9; of mowing lands 96.3. The winter wheat of the Ohio Valley, while maintaining its April position, has had a scant supply of moisture and fears of future decline of condition are entertained. On the Atlantic slope the recent heavy rains have obviated the effects of previous deficiency. The plant is generally green and flourishing, but has not tillered well in localities inclining to dryness. High condition is reported in the South, though rust has appeared upon the wheat blades in some fields. The percentages of condition of states of principal production are: Ohio 90; Michigan 92; Indiana 98; Illinois 98; Missouri 98; Kansas 98; Texas 88; New York and Pennsylvania average 96, and Maryland and Virginia 98. Chinch bugs are reported in Missouri and Kansas, and in some instances elsewhere, without indication of serious injury. Spring ploughing was much further advanced than on May 1 of last year. The percentage of ploughing in preparing the seed bed and planting seed crops, not inclusive of after cultivation which had already been done, is 83.6 per cent., leaving one sixth to be done in May and June, mainly in northern latitudes. Last year the percentage was 74.6. The average of a series of recent years has been about 77. This season is therefore unusually early. In some cases correspondents speak of delays from heavy rains, from labor of replanting and other causes, preventing still further advancement.

May corn closed at 43½c. and oats at 29½c. Wheat flour was dull and unsalable, except in job lots. Exporters took some. The other lines were featureless.

On Saturday the general rains reported in the West and the crop report of the government made the markets dull and lower. May wheat closed at 84c. Options 750,000 bushels. Trade was small. May corn closed at 42½c. and oats at 29½c. Wheat flour was generally unchanged, in spite of lower wheat, as it was too scarce on all grades but spring patents to cause anxiety to sell, and demand was better. There was some export demand. The minor lines were featureless.

On Monday reports of western rains made the markets easier. May wheat closed at 84½c. Options 1,850,000 bushels. May corn closed at

42½c. and oats at 29c. Wheat flour was neglected and unchanged, with cable limits 6d. lower. A good export inquiry had been anticipated, but it did not materialize. The minor lines were quiet and featureless.

On Tuesday the bears raided wheat, selling the December option freely. As a consequence May wheat closed at 84c. Options only 1,100,000 bushels. May corn strengthened up to 42½c. and oats up to 29½c. at closing. Wheat flour was again neglected, on lower shippers' limits, and exporters were out of the markets, low grades from \$3.25 down being very scarce, and those from \$3.25 to \$4 not being in demand, except at concessions for the United Kingdom. The minor lines were featureless.

On Wednesday the favorable crop and weather reports weakened wheat somewhat. Even the European weather cables were bearish. May wheat closed at 83c., June at 83½c., July at 84½c., August at 88½c., and September at 89½c., the various months ranging in price from 9 to 13 cents below the prices on the same day last year. Options 1,300,000. May corn closed at 42½c., against 67½c. on the same date last year. May oats closed at 29½c., against 39½c. last year. Corn options were 400,000 bushels, and oats 230,000 bushels. Rye grain was in good local demand for distilling at the following quotations: Jersey and Pennsylvania on track 54@55c; No. 1 elevator 56@57c; State, afloat, 56@58c; Western do, 50c on spot, 49c to arrive. Malt nominally steady but unchanged: 95c@\$1.05 for the whole range in Canada, both country and city made; six-rowed 87½@92½c: two-rowed do 85@90c: Western 70@85c to arrive. Mill feed was steady and unchanged, because the city mills were mostly sold up and not pressing sales; while Western is not plenty and firm on the track at old prices. Quotations are: 55@65c for 40 lbs, chiefly 60c; 60lb, 55c; 80lb, 60@65c; 100lb, 70@80c; sharps 80@85c; rye, 75c; oil meal, \$1.27½@1.32; cotton seed meal, \$1.25@1.35.

Wheat flour was easier and duller with wheat. Soft spots showed here and there in the markets, both in patent springs and clear springs or bakers' extras, and in winter clears or straights in sacks, which could be shaded in lines for exports. Following are the flour quotations for the day:

SPRING FLOUR.

	Sacks.	Barrels.
No grade.....	\$1.60@1.80	\$....@....
Fine.....	2.00@2.20	2.25@2.50
Superfine	2.25@2.65	2.60@3.00
Extra No. 2	2.85@3.00	3.00@3.25
Extra No. 1.....	3.25@3.75	3.50@4.25
Clear	3.35@3.75	3.75@4.00
Straight	4.45@5.00	4.50@5.50
Patent	5.35@5.75	5.25@6.15

WINTER FLOUR.

	Sacks.	Barrels.
No grade.....	\$1.80@2.00	\$....@....
Fine	2.20@2.50	2.35@2.60
Superfine	2.40@3.00	2.90@3.15
Extra No. 2	3.10@3.50	3.35@3.60
Extra No. 1.....	3.50@4.25	4.00@5.10
Clear	3.75@4.20	4.05@4.35
Straight	4.50@4.75	4.65@5.10
Patent	4.75@5.00	5.00@5.65

CITY MILLS.

W. I. grades.....	\$4.35@4.55
Low grades.....	2.35@2.50
Patents.....	5.00@6.00

The European flour-buyers appear determined to recognize no "bottom" in American prices. No matter to what notch American prices sink, the European buyers keep a little below that notch. That fact seems to prove that the stocks of flour and wheat are not so short as the reported shortage of the 1888 crop ought to have left them.

Rye flour was dull and steady at \$2.90@3.00. Corn products were quiet and steady on barrel stock, while bag meal was barely so on the spot with corn. But with better supplies of the latter soon and anticipated easier prices, buyers held off and trade is dull. Following are the quotations: 83@85c. for coarse meal in bags, 95c@\$1.00 for fine yellow, \$1.00 for fine white, 80c@\$1.30 for the whole range on Southern in bags and \$2.75@3.25 in barrels, including granulated. Hominy \$3.50@3.60. Brandywine \$2.85.

On Thursday there was nothing new in market conditions. May wheat closed at 82½c. Options 2,456,000 bushels. May corn closed at 42½c. and oats at 29½c. The minor lines were quiet and featureless. Wheat flour was slow, dull and heavy.

BUFFALO MARKETS.

WHEAT—There were a few sales made to-day, but the market closed quiet with prospects of higher prices to be paid to-morrow; sales comprised 8,800 bu new No. 1 hard in two lots at \$1.05; 600 do old No. 1 Northern at \$1.00. 500 do old No. 1 hard at \$1.20½; 500 bu new No. 1 hard at \$1.05; No. 1 Northern new and old quoted at \$1.00, and No. 2 do at 85c. Chicago May wheat opened at 83½c; highest 83½c. lowest 82c. and closed at 82c. a decline of 1½c from the opening price, and a decline of 1½c from last night's closing price. Chicago July wheat opened at 77½c; highest 77½c. and closed at 76½c. a decline of 1½c from the opening price, and a decline of 1½c from last night's closing price. Winter wheat dull and market lower; salts 1 carload No. 1 at 99c on track; No. 2 red was quoted at 91½c; No. 3 do at 82c. and No. 1 white at 93c in store. CORN—Dull and lower; 10 carloads No. 2 yellow sold at 39c. on track; there was no No. 3 yellow offered. No. 2 corn was quoted at 38½c; No. 3 do, 38½c; No. 2 yellow at 39½c. in store. OATS—Strong and higher; a few carloads No. 2 white sold at 31½c@31½c; No. 3 white was quoted at 30½c. on track; and No. 2 mixed sold at 27½. CANAL FREIGHTS—Firm. Rates of freight on wheat to New York 4c. on corn 3½c, on oats 2½c. and on rye, 3½c; lumber rates to New York \$3.25. to Albany \$1.75. RYE—Nominal at 52@53c for No. Western. FLOUR—City ground—Patent spring \$6.26@6.50 straight Duluth spring, \$5.75@6.00; bakers' spring, best, \$5.50@5.75; do rye mixture, \$4.75@5.00; patent winter, \$6.25@6.50; straight winter, \$5.00@5.25; clear winter \$4.75@5.00; cracker, \$4.75@5.00; graham \$4.75@5.00; low grade, \$3.09@4.00; rye, \$3.25@3.50 per bbl. OATMEAL—Akron, \$6.00; Western \$5.75 per bbl; rolled oats, in cases, 72 lbs \$3.25. CORNMEAL—Coarse, 80c; fine, 85c; granulated, \$1.50 per cwt.

T. GRANGER STEWART, M. D., F. R. S. E., Ordinary Physician to H. M., the Queen, in Scotland, Professor of Practice of Physic in the University of Edinburgh, writes: "The arteries are sclerosed and atheromatous in the advanced stages of the inflammatory and in the cirrhotic but not so small in the waxy disease. In that affection the small vessels in other parts are frequently the seat of waxy degeneration." From this it will be seen that in the three forms of kidney disease classed as Bright's disease, the arteries suffer changes, and it matters not whether they undergo sclerotic, atheromatous or waxy change, they are so weakened as to endanger rupture under any increased pressure. This explains the frequency of apoplexy and paralysis, and as clearly demonstrates that the only preventive of these disastrous ruptures of the blood vessels is the timely use of Warner's Safe Cure to keep the kidneys in a healthy condition.

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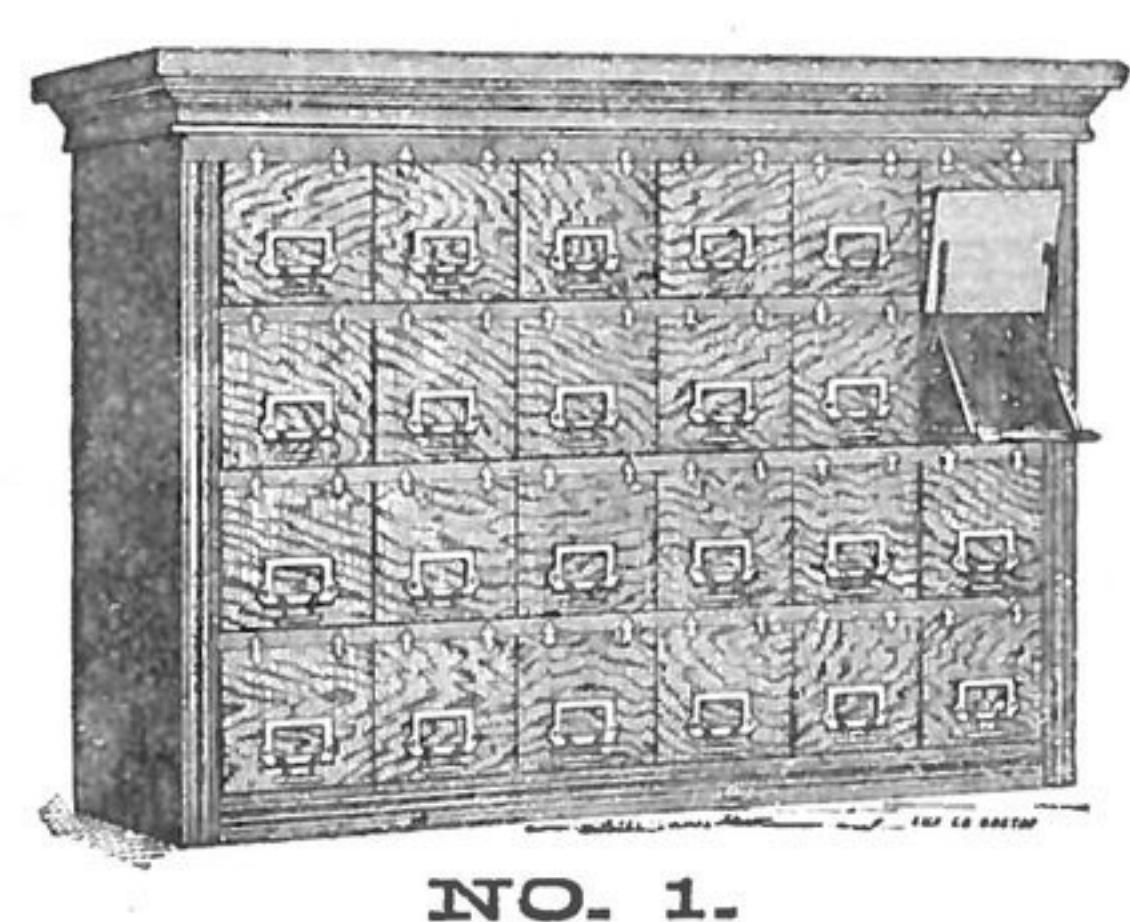


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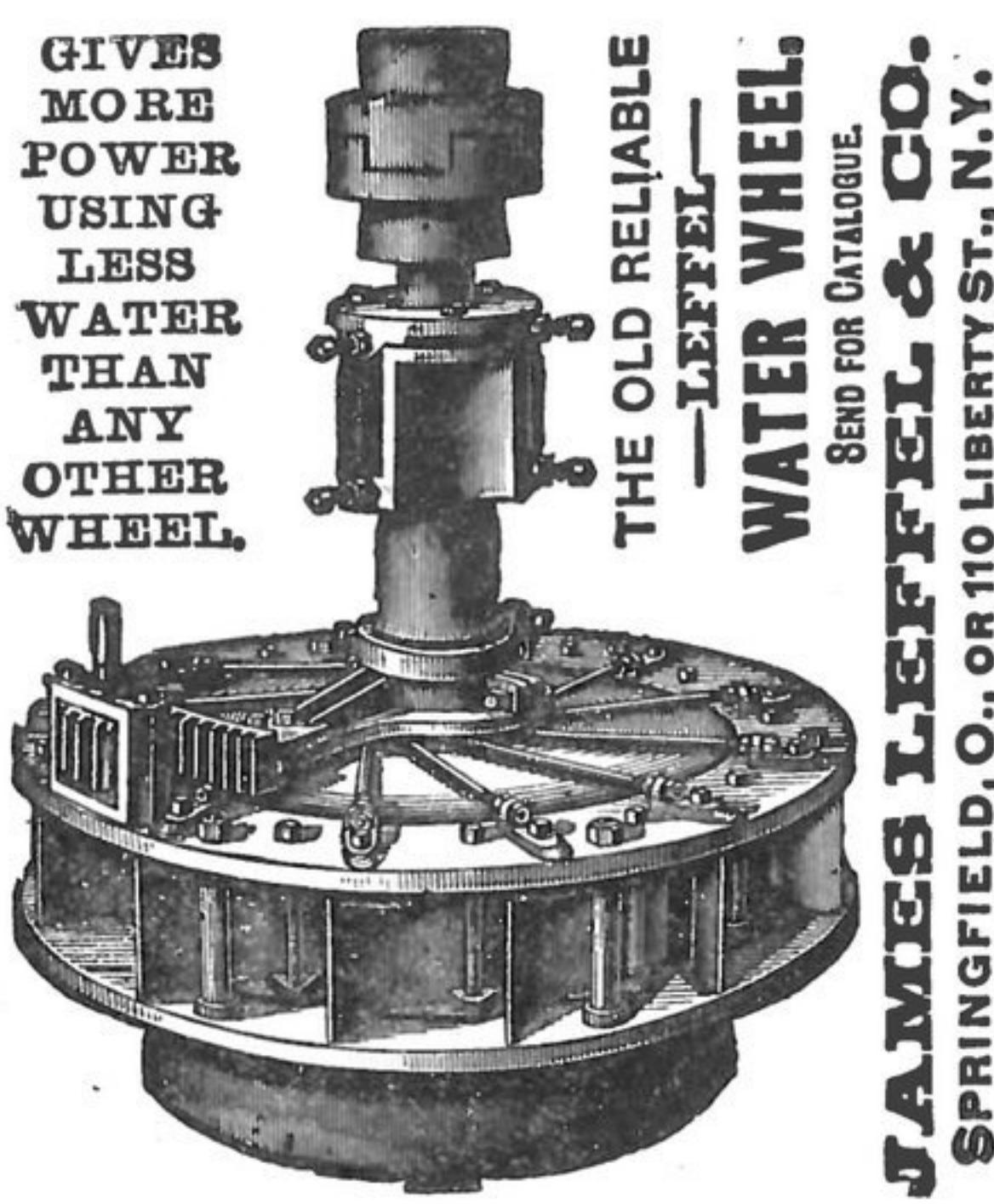
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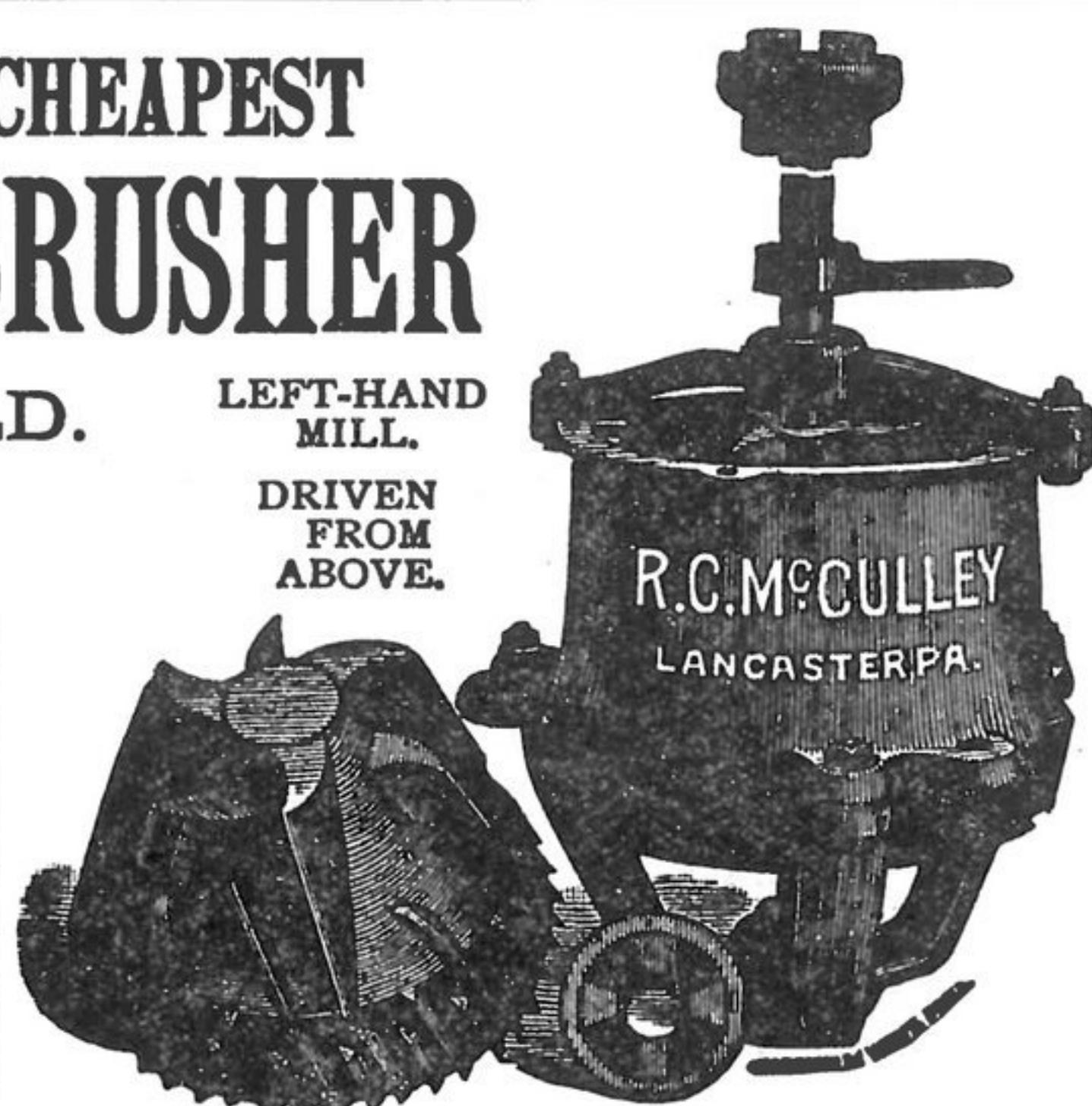
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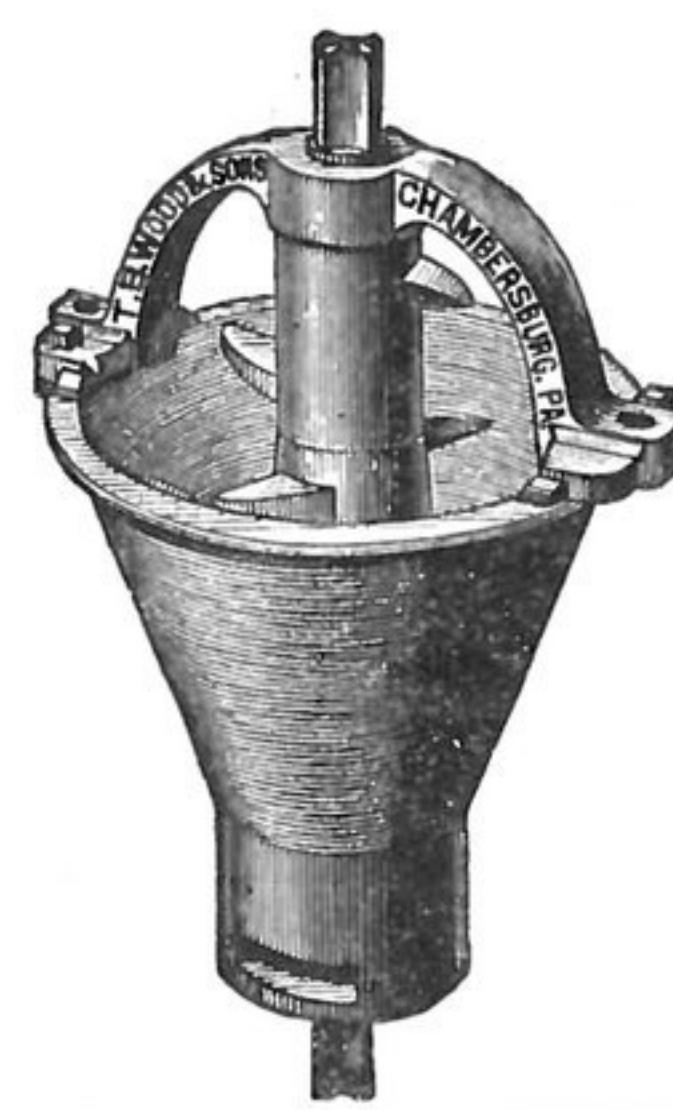
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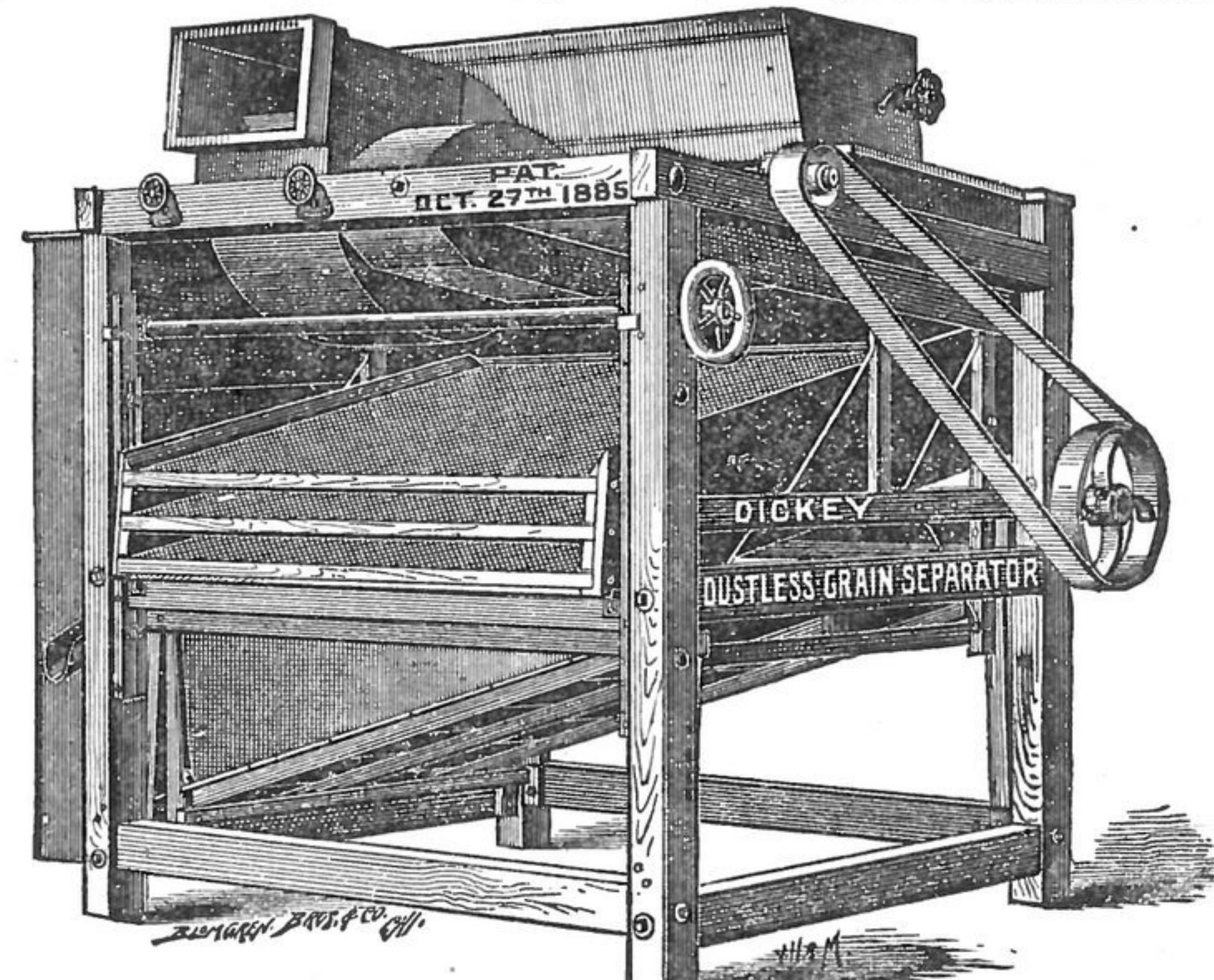


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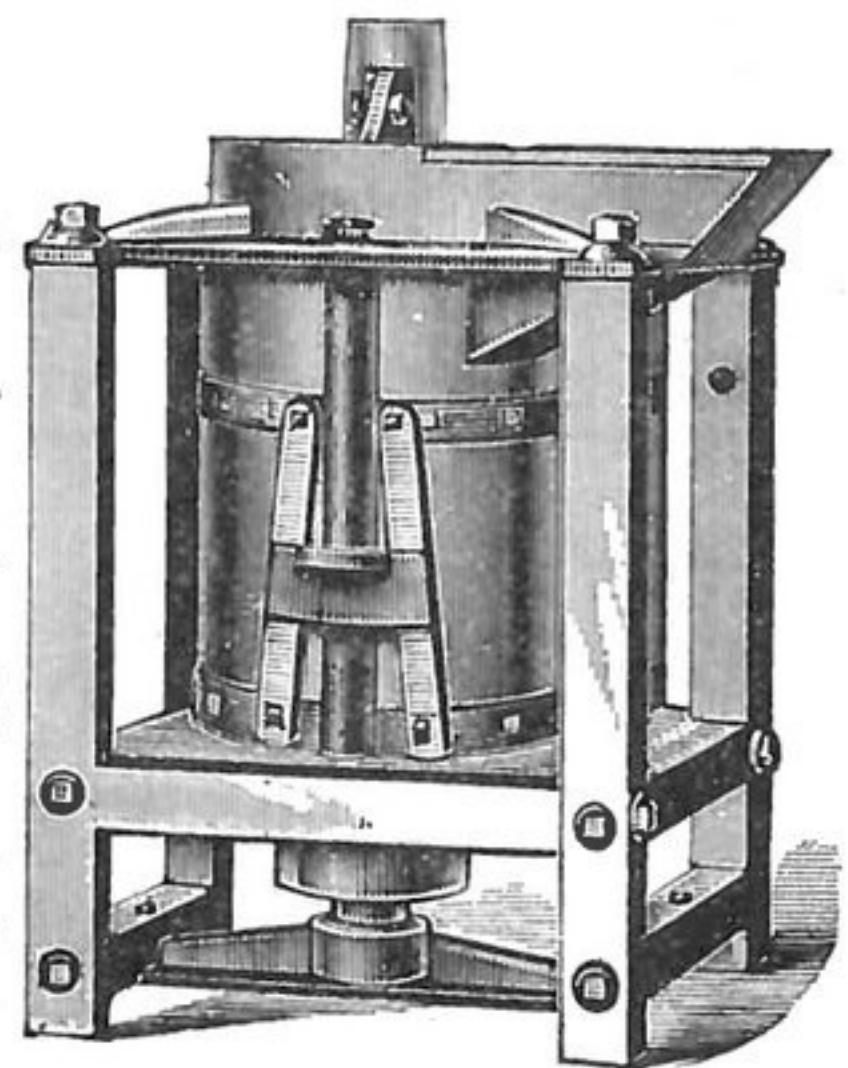
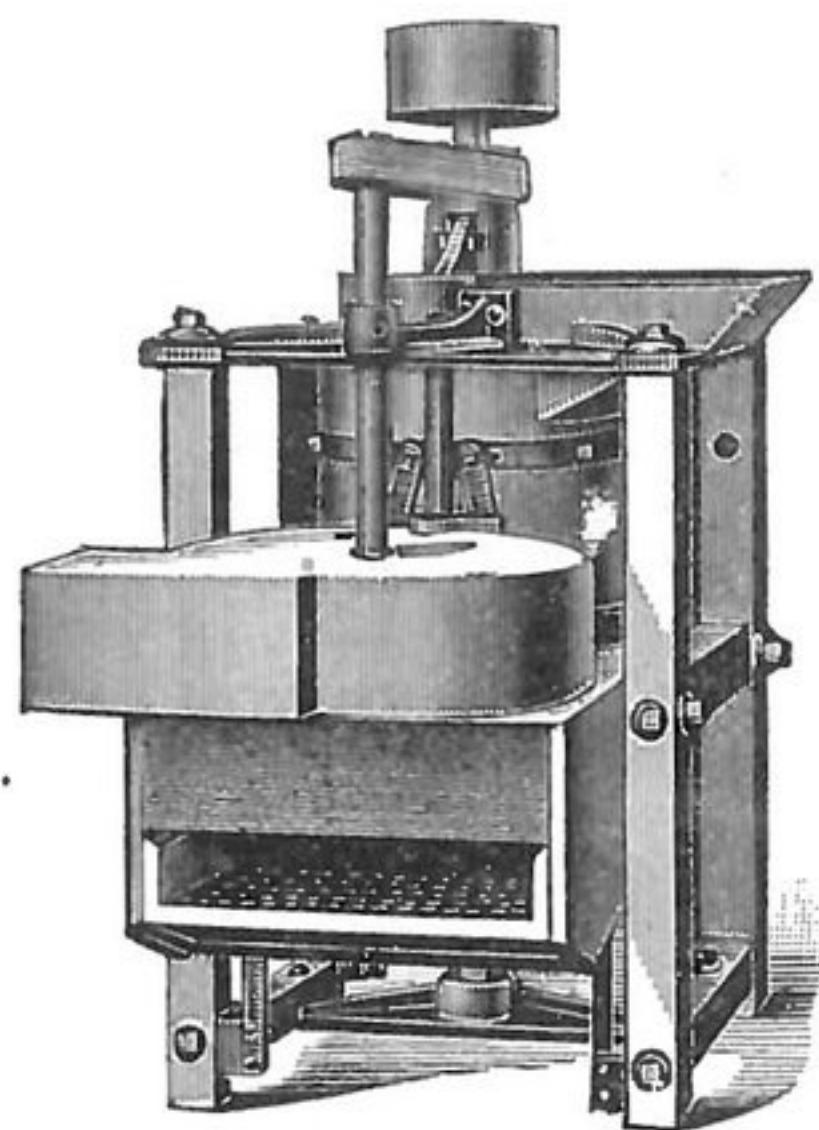
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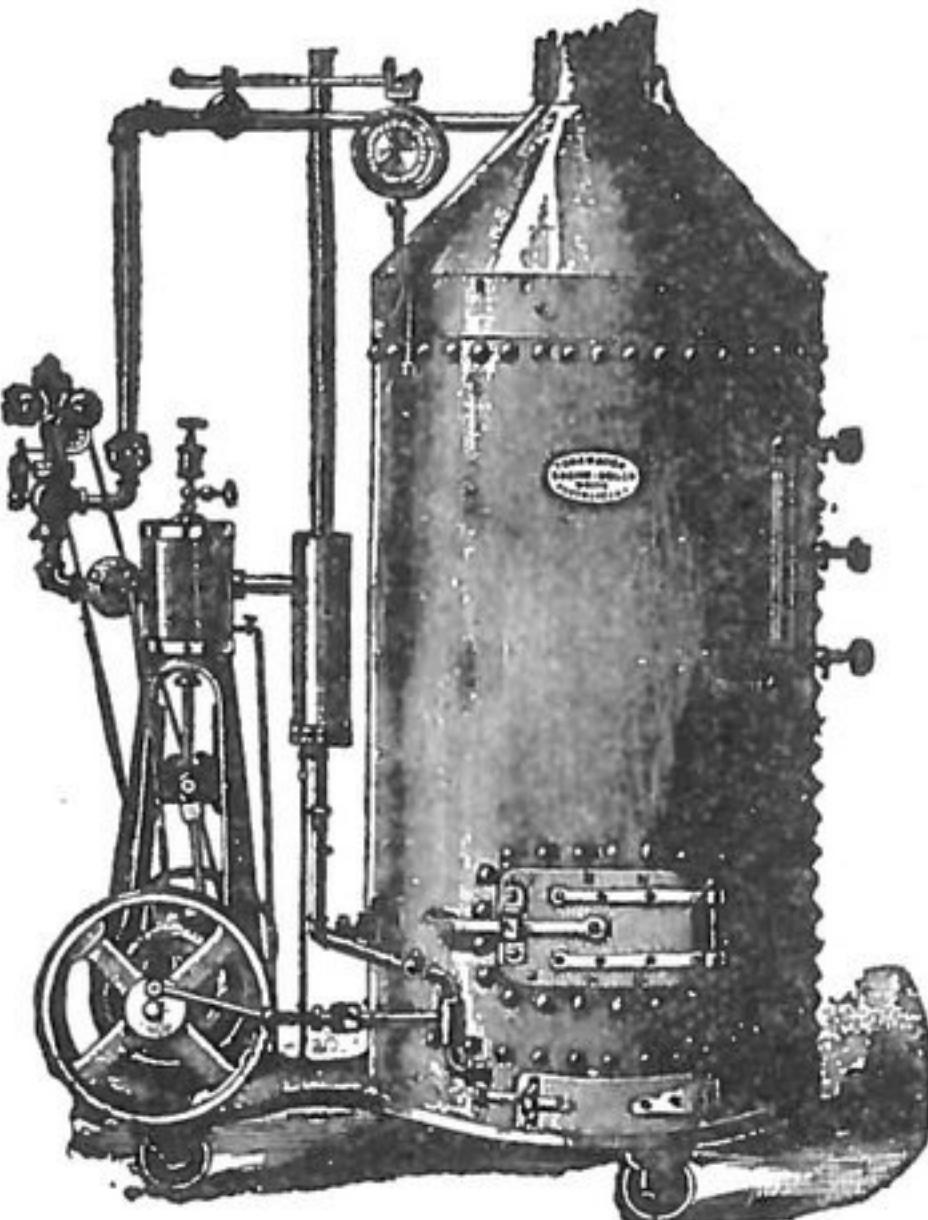
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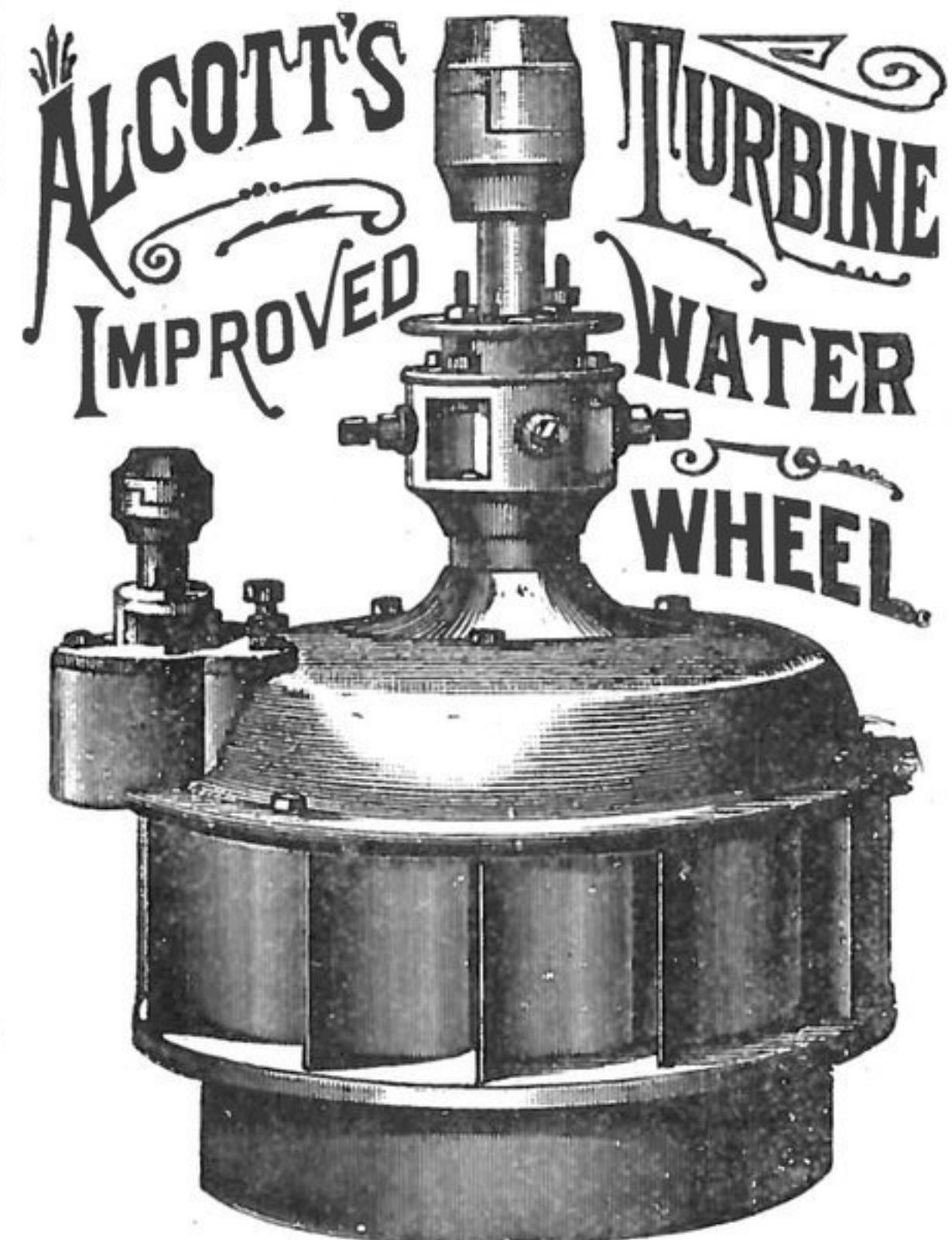
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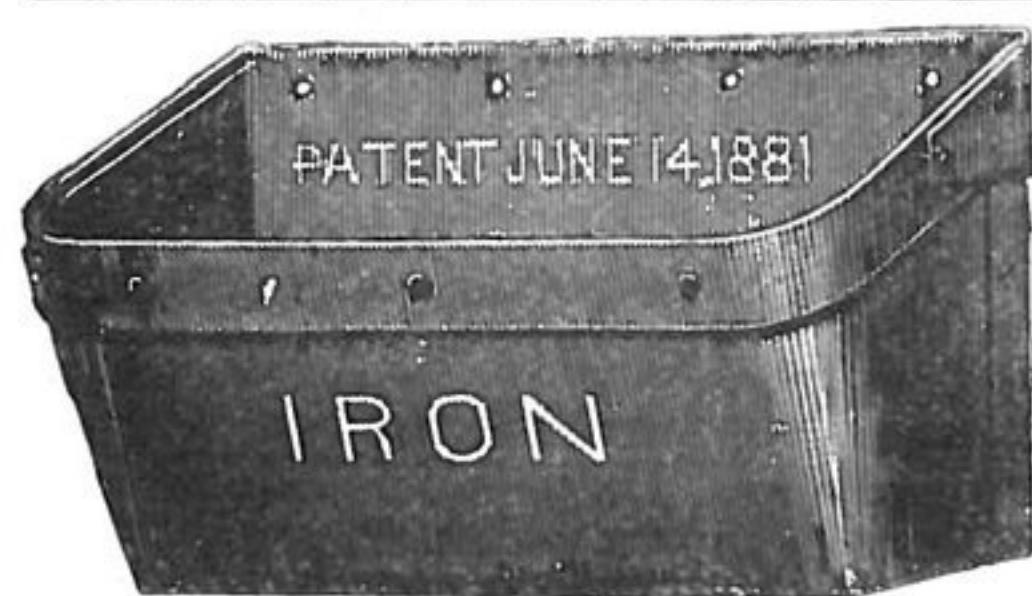
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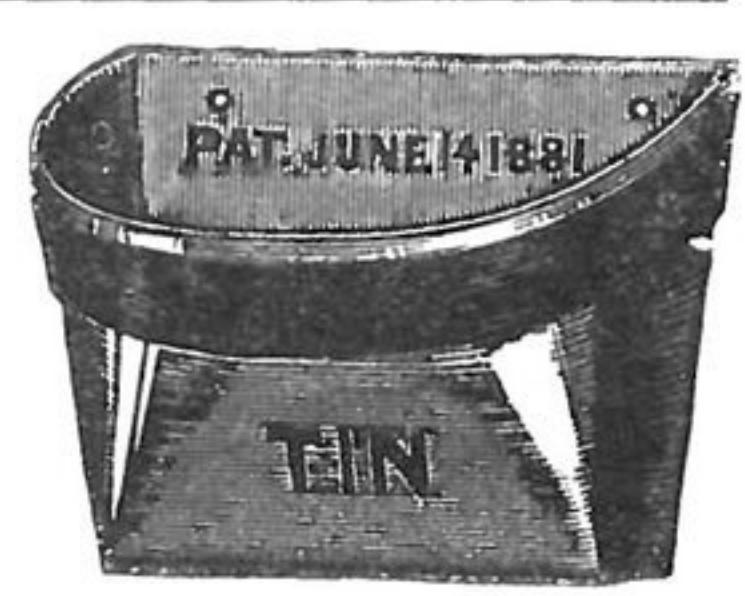
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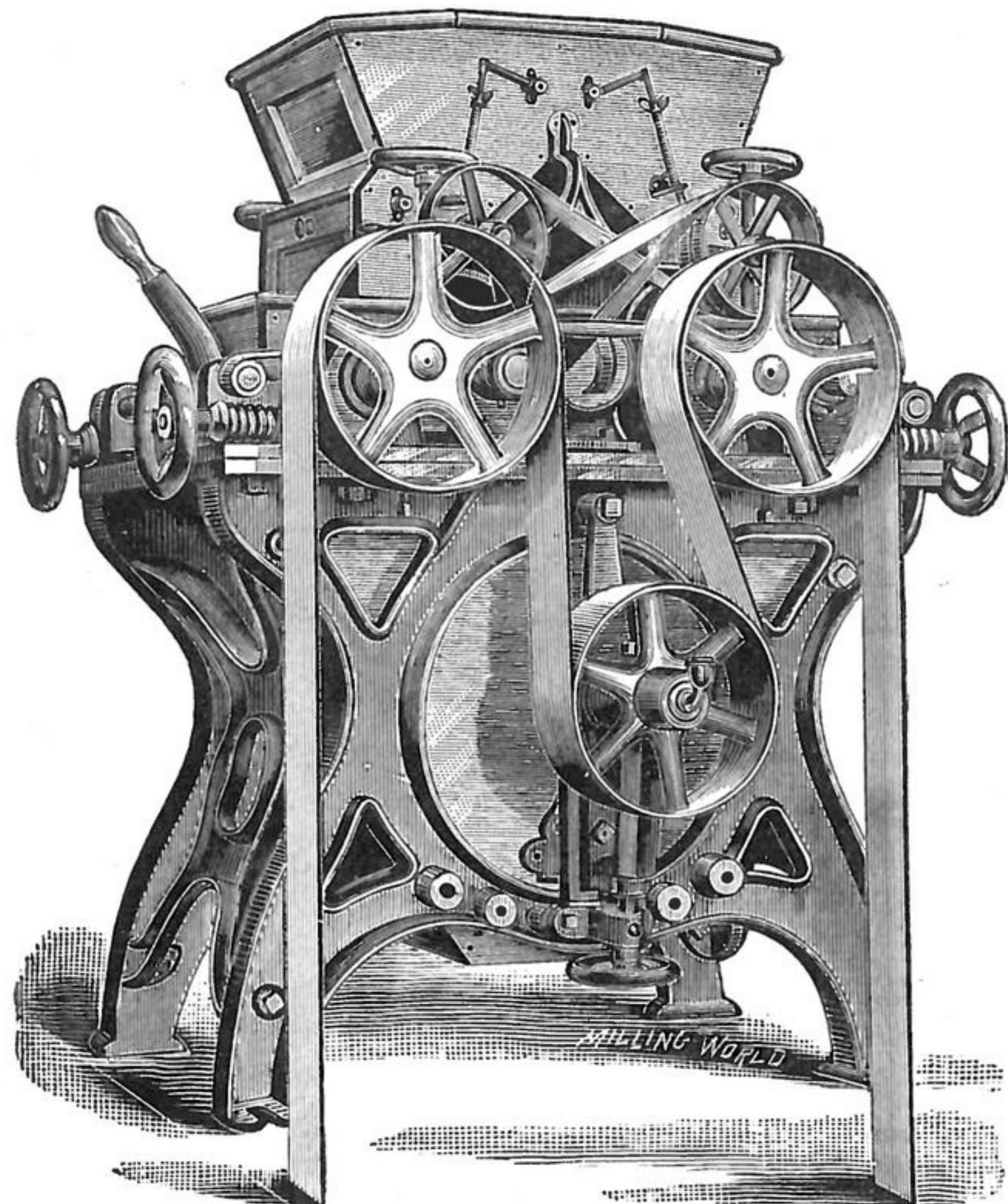
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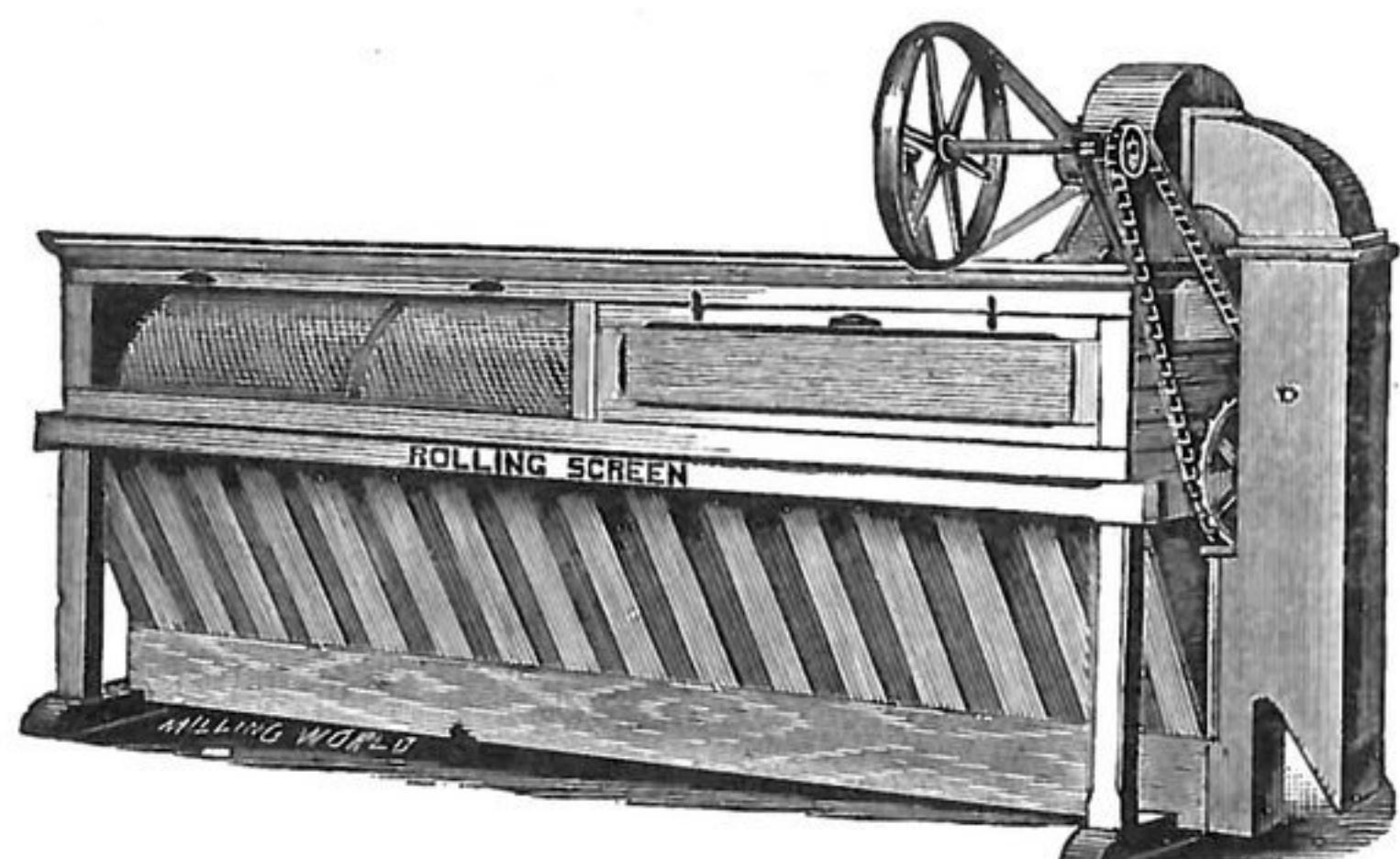
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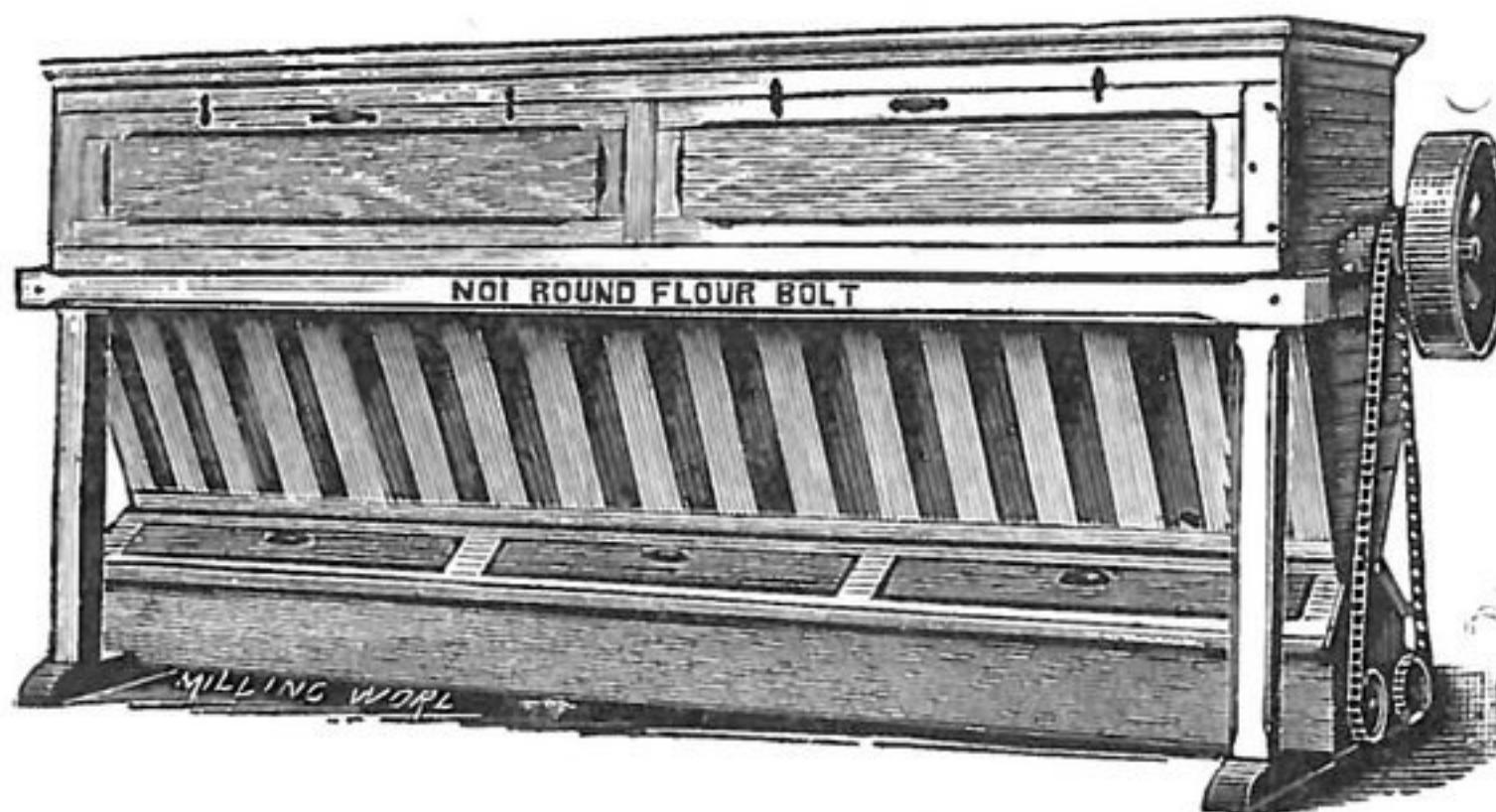
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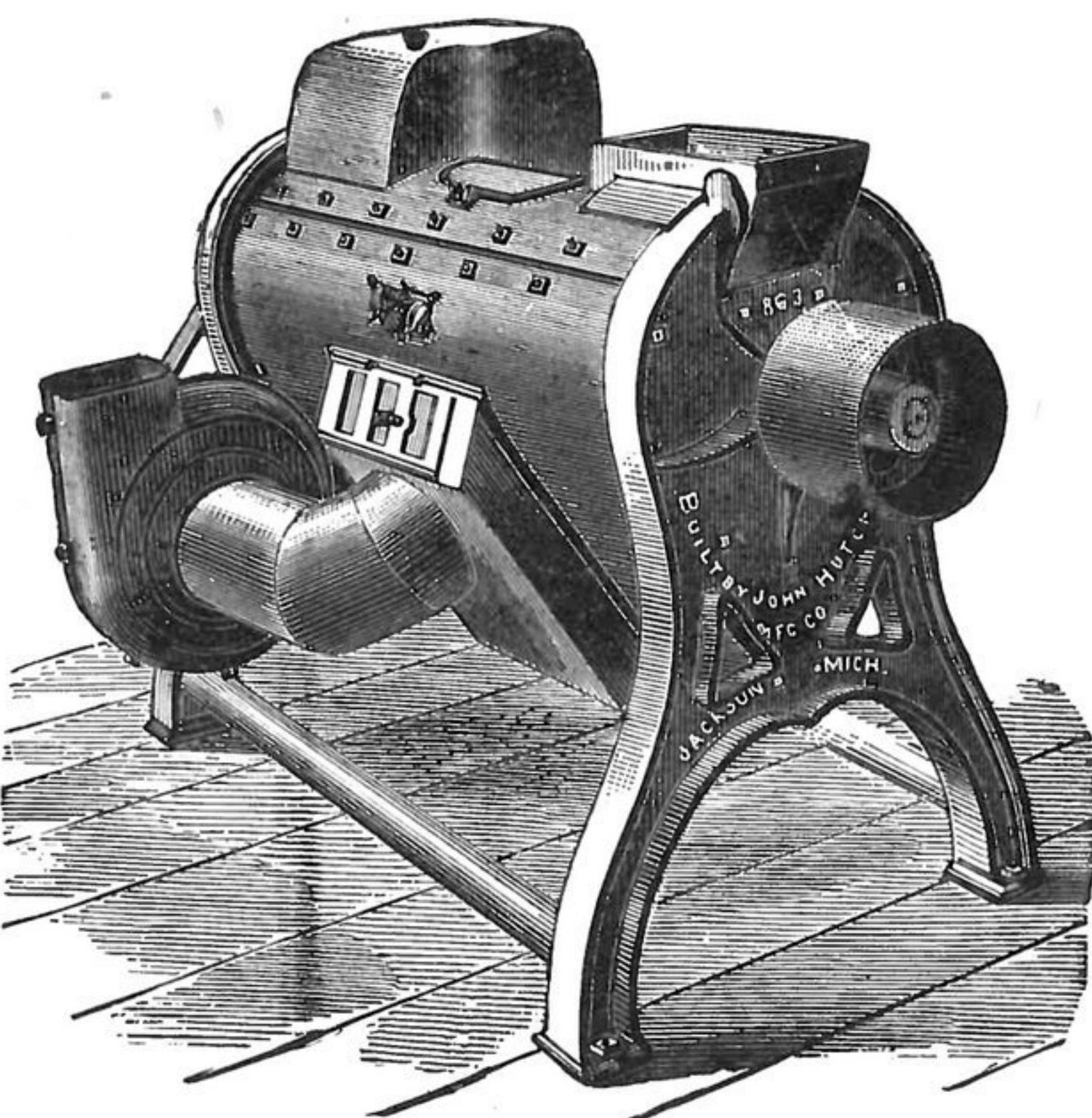


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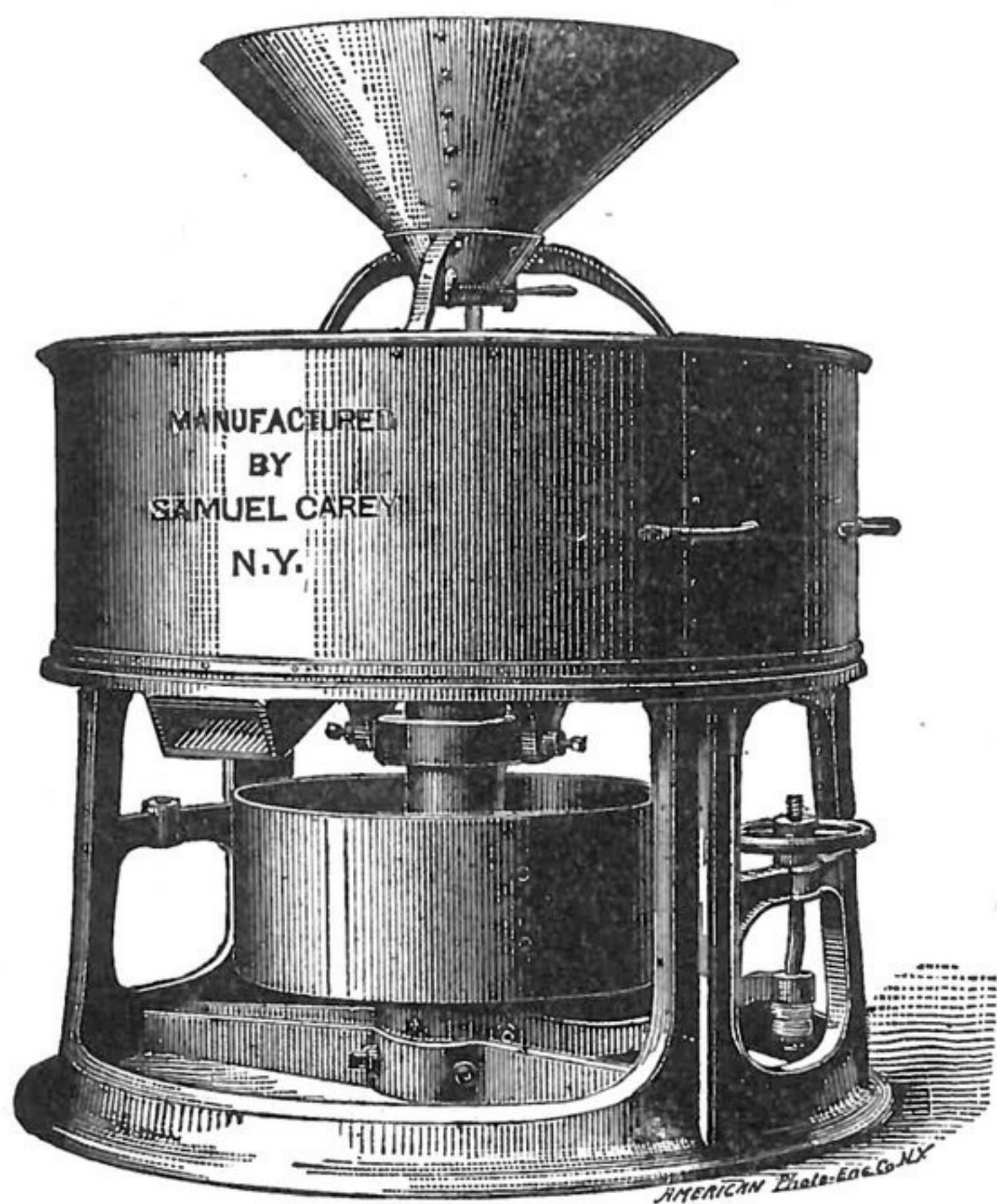
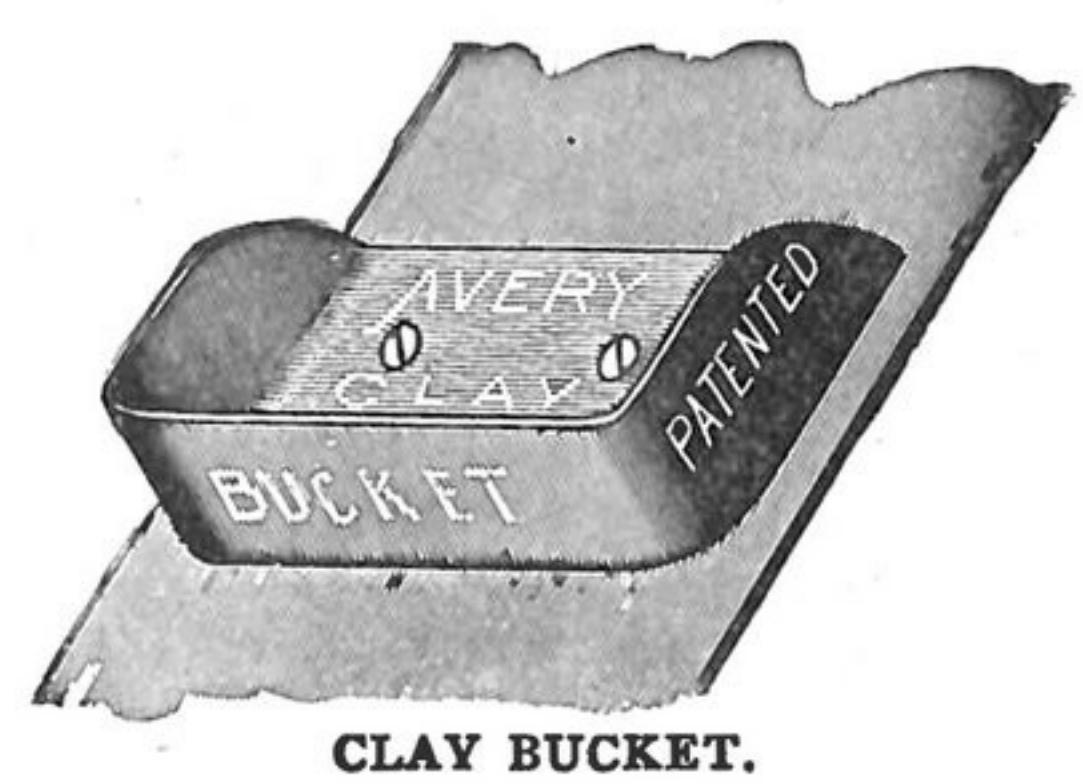


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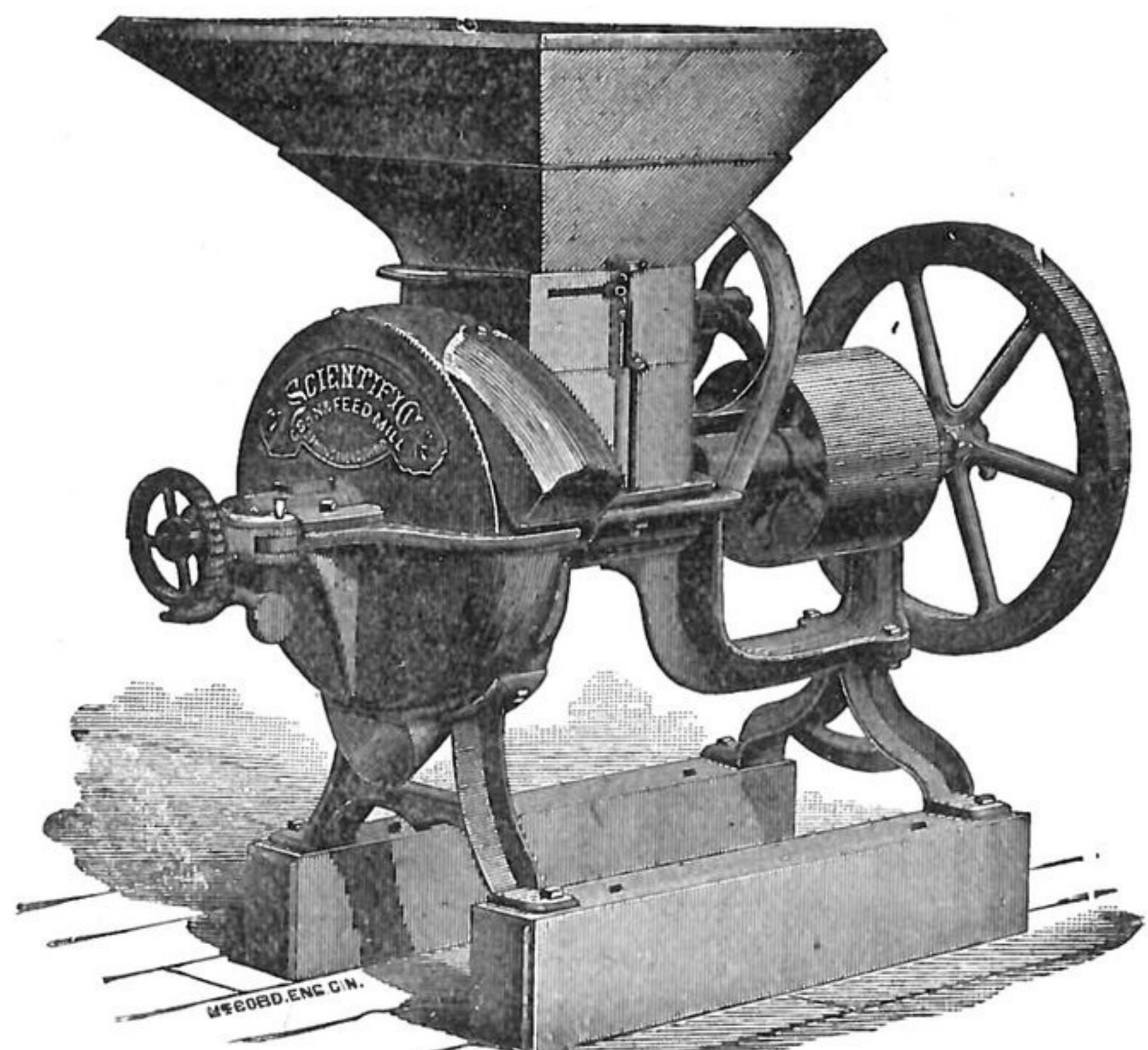
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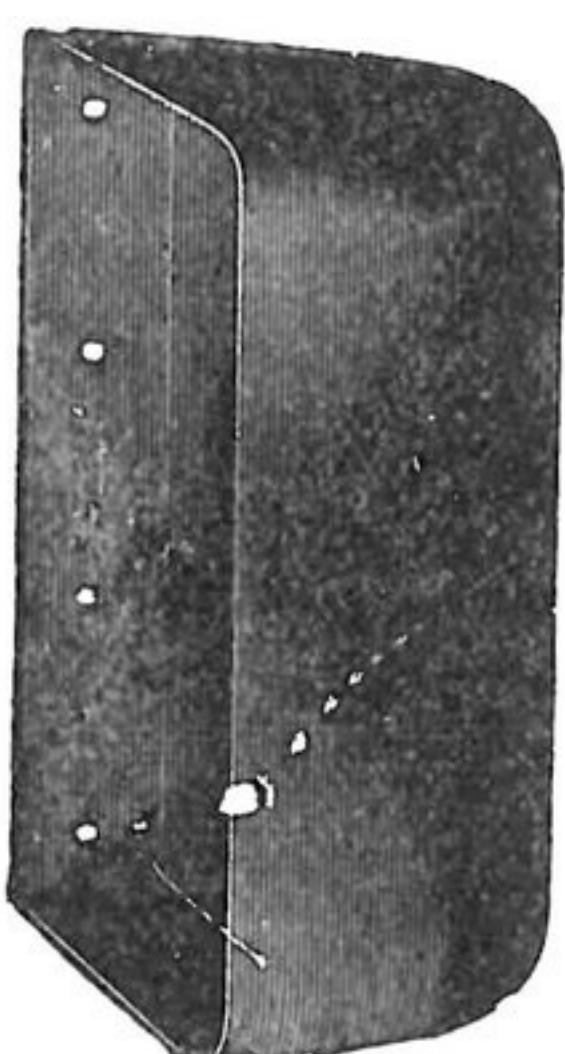
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